Acrylonitrile-Butadiene Rubber (NBR) from France, Mexico, and South Korea

Investigation Nos. 731-TA-1567-1569 (Final)

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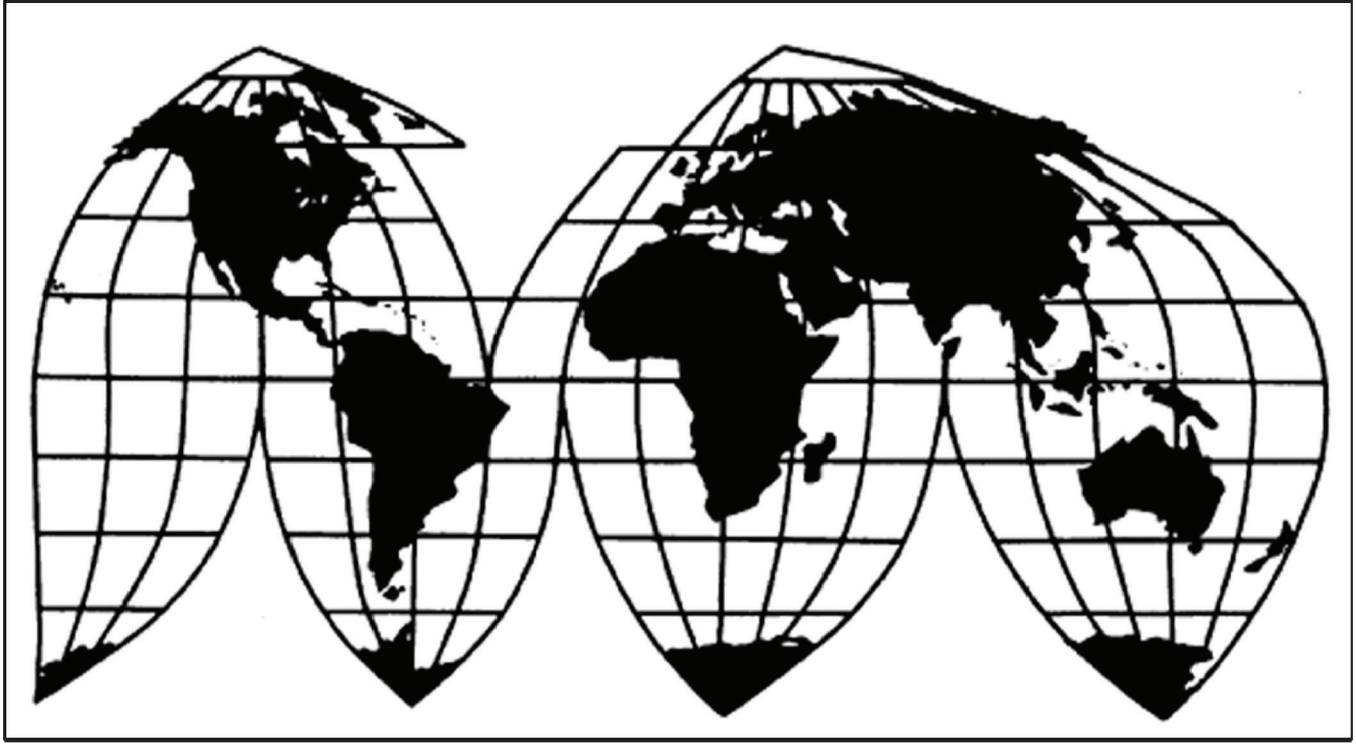
U.S. International Trade Commission



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Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified by brackets in confidential reports and is deleted and replaced with asterisks (***) in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 731-TA-1567-1569 (Final)

Acrylonitrile-Butadiene Rubber (NBR) from France, Mexico, and South Korea

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is not materially injured or threatened with material injury by reason of imports of acrylonitrile-butadiene rubber from France, Mexico, and South Korea, provided for in subheading 4002.59.00 of the Harmonized Tariff Schedule of the United States, that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").[2]

BACKGROUND

The Commission instituted these investigations effective June 30, 2021, following receipt of petitions filed with the Commission and Commerce by Zeon Chemicals L.P. and Zeon GP, LLC (collectively, "Zeon"), Louisville, Kentucky. The Commission scheduled the final phase of the investigations following notification of preliminary determinations by Commerce that imports of acrylonitrile-butadiene rubber from France, Mexico, and South Korea were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of March 1, 2022, (87 FR 11481). The Commission conducted its hearing on June 1, 2022. All persons who requested the opportunity were permitted to participate.

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[1] The record is defined in § 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] 87 FR 37825, 87 FR 37829, and 87 FR 37833, June 24, 2022.

Views of the Commission

Based on the record in the final phase of these investigations, we determine that an industry in the United States is not materially injured or threatened with material injury by reason of imports of Acrylonitrile-Butadiene Rubber ("NBR") from France, Mexico, and South Korea found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value.[1]

I. Background

Zeon Chemicals L.P. and Zeon GP, LLC (collectively "Zeon" or "Petitioner"), a domestic producer of NBR, filed the petitions in these investigations on June 30, 2021.[2] Petitioner appeared at the hearing and filed prehearing and posthearing briefs and final comments.[3]

The following respondent parties appeared at the hearing and submitted prehearing and posthearing briefs and final comments: Arlanxeo Emulsion Rubber France S.A.S. and Arlanxeo USA LLC (collectively "Arlanxeo"), a producer and exporter of NBR in France and its affiliated U.S. importer; Kumho Petrochemical Co., Ltd. ("Kumho"), a producer and exporter of NBR in South Korea; and Negromex, S.A. de C.V. and Dynasol, LLC (collectively "Negromex"), a producer and exporter of NBR in Mexico and its affiliated U.S. importer. Armacell, LLC ("Armacell"), a U.S. purchaser and importer of subject merchandise, did not appear at the hearing, but submitted prehearing and posthearing briefs. Omnova Solutions SAS and Omnova Solutions Inc. (collectively "Omnova"), a producer and exporter of NBR in France and its affiliated U.S. importer, did not appear at the hearing, but submitted a posthearing brief. Dayco Products, LLC ("Dayco") and ITT Inc. and its subsidiary Wolverine Advanced Materials (collectively "ITT"), both U.S. purchasers of NBR from France, submitted non-party statements.[4]

[1] Material retardation is not an issue in these investigations.

[2] Confidential Report, Memorandum INV-UU-070 (Jun. 24, 2022), as amended by Memoranda INV-UU-071 (Jun. 30, 2022) ("CR") at I-1; Public Report, *Acrylonitrile-Butadiene Rubber from France, Mexico, and South Korea*, Inv. Nos. 731-TA-1567-1569 (Final), USITC Pub. 5336 (Aug. 2022) ("PR") at I-1.

[3] In light of the restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted its hearing through written witness testimony and videoconference held on June 1, 2022, as set forth in procedures provided to the parties. *Acrylonitrile-Butadiene Rubber (NBR) From France, Mexico, and South Korea; Scheduling of the Final Phase of Anti-Dumping Duty Investigations*, 87 Fed. Reg. 11481 (Mar. 1, 2022).

[4] An ITT representative also appeared at the hearing.

U.S. industry data are based on the questionnaire response of one firm, Zeon, that accounted for all U.S. production of NBR in 2021.[5] U.S. import data are based on official import statistics and the questionnaire responses of 18 importers, which are estimated to account for *** percent of subject imports from France, *** subject imports from Mexico, *** percent of subject imports from South Korea, *** percent of nonsubject imports from Japan (the largest nonsubject source), and *** percent of nonsubject imports from all other sources.[6] The Commission received responses to its questionnaires from four foreign producers of subject merchandise: two producers/exporters in France, accounting for *** U.S. imports of subject merchandise from France in 2021;[7] one producer/exporter in Mexico, accounting for *** U.S. imports of subject merchandise from Mexico in 2021;[8] and one producer/exporter in South Korea, accounting for *** percent of U.S. imports of subject merchandise from South Korea in 2021.[9]

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[10] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[11] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[12]

[5] CR/PR at I-4 and III-1. Zeon ***. *Id*. at III-3, n.3.
[6] CR/PR at I-4.
[7] CR/PR at VII-3.
[8] CR/PR at VII-11.
[9] CR/PR at VII-18.
[10] 19 U.S.C. § 1677(4)(A).
[11] 19 U.S.C. § 1677(4)(A).
[12] 19 U.S.C. § 1677(10).

By statute, the Commission's "domestic like product" analysis begins with the "article subject to an investigation," *i.e.*, the subject merchandise as determined by Commerce.[13] Therefore, Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is "necessarily the starting point of the Commission's like product analysis."[14] The Commission then defines the domestic like product in light of the imported articles Commerce has identified.[15] The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[16] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[17] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[18]

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[13] 19 U.S.C. § 1677(10). The Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[14] *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v. United States*, 949 F.3d 710, 717 (Fed. Cir. 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[15] *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Torrington Co. v. United States*, 747 F. Supp. 744, 748–52 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

[16] *See*, *e.g.*, *Cleo*, 501 F.3d at 1299; *NEC Corp. v. Dep't of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington*, 747 F. Supp. at 749 n.3 ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors, including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[17] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[18] *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49; *see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

B. Product Description

Commerce defined the imported merchandise within the scope of these investigations as:

> {A}crylonitrile butadiene rubber or nitrile rubber (AB Rubber). AB Rubber is a synthetic rubber produced by the emulsion polymerization of butadiene and acrylonitrile with or without the incorporation of a third component selected from methacrylic acid or isoprene. AB Rubber products that include a third component that is not methacrylic acid or isoprene are not covered by the scope. This scope covers AB Rubber in solid or non-aqueous liquid form. The scope also includes carboxylated AB Rubber.
>
> Excluded from the scope of this investigation is AB Rubber in latex form (commonly classified under Harmonized Tariff Schedule of the United States (HTSUS) subheading 4002.51.0000). Latex AB Rubber is commonly either (a) acrylonitrile/butadiene polymer in latex form or (b) acrylonitrile/butadiene/methacrylic acid polymer in latex form. The broader definition of latex refers to a water emulsion of a synthetic rubber obtained by polymerization.
>
> Also excluded from the scope of this investigation is: (a) AB Rubber containing additives incorporated during the compounding, mixing, molding, or use of AB Rubber comprising greater than twenty percent of the total weight of the product. Additives would include, but are not limited to, fillers (*e.g.*, carbon black, silica, clay); reinforcement agents (*e.g.*, fibers, carbon black, silica); vulcanization agents (*e.g.*, sulfur, sulfur complexes, peroxide); or AB Rubber containing extension oils making up greater than forty percent of the total weight of the product. Such products would be generally classified under HTSUS subheading 4005; (b) AB Rubber containing polyvinyl chloride (PVC) making up greater than twenty percent of total weight of the product; (c) hydrogenated AB Rubber (commonly referred to as HNBR) produced by subsequent dissolution and hydrogenation of AB Rubber; (d) reactive liquid polymers containing acrylonitrile and butadiene with amine, epoxy, carboxyl or methacrylate vinyl chemical functionality.
>
> Subject merchandise includes material matching the above description that has been finished, packaged, or otherwise processed in a third country, including by modifying physical form or packaging with another product, or performing any other finishing, packaging, or processing that would not otherwise remove the merchandise from the scope of the

investigation if performed in the country of manufacture of the AB Rubber.[19]

NBR is a type of synthetic rubber that is a bipolymer of acrylonitrile ("ACN") and butadiene, or a terpolymer with an additional third component selected from methacrylic acid or isoprene. The product can be in a solid or non-aqueous liquid form. The terpolymer with the third component selected from methacrylic acid can be carboxylated in its form and is termed carboxylated NBR ("XNBR").[20]

NBR can generally function in minus 40-degree to 226-degree Fahrenheit temperatures. NBR is more puncture resistant than natural rubber, and is resistant to cuts, abrasion, tears, caustics, and aliphatic hydrocarbons. NBR is less flexible than natural rubber. NBR products vary in their ACN content, Mooney viscosity,[21] and physical form. In general, as ACN content increases, oil and fuel resistance increase, tensile strength and hardness increase, and heat and abrasion resistance improve; as ACN content decreases, low temperature performance, dynamic performance, compression set, and resilience all improve. NBR is mostly used in applications in which a moderate level of heat and oil or fuel resistance are required, such as in the industrial hose, automotive, and oil and gas industries.[22]

[19] *Acrylonitrile-Butadiene Rubber from France: Final Affirmative Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part,* 87 Fed. Reg. 37833 (Jun. 24, 2022); *Acrylonitrile-Butadiene Rubber from the Republic of Korea: Final Affirmative Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part,* 87 Fed. Reg. 37825 (Jun. 24, 2022)*; Acrylonitrile-Butadiene Rubber from Mexico: Final Affirmative Determination of Sales at Less Than Fair Value,* 87 Fed. Reg. 37829 (Jun. 24, 2022).

[20] CR/PR at I-9. XNBR is included within the scope. *See* 87 Fed. Reg. 37833 (Jun. 24, 2022); 87 Fed. Reg. 37825 (Jun. 24, 2022); and 87 Fed. Reg. 37829 (Jun. 24, 2022). XNBR materials are typically used in the same applications as NBR but where improved abrasion resistance and improved tensile strength may be desired in the finished article. CR/PR at I-11.

[21] Higher Mooney viscosity results in improved strength, but decreased processability, while lower Mooney viscosity materials are easier to process. Mooney viscosity is measured in terms of Mooney units. CR/PR at I-10.

[22] CR/PR at I-9-10.

C. Analysis

In its preliminary determinations, the Commission found that clear lines did not divide domestically produced in-scope NBR products from each other,[23] but that clear lines did divide domestically produced in-scope NBR products from out-of-scope NBR products, namely latex NBR and hydrogenated NBR ("HNBR").[24] Accordingly, the Commission defined a single domestic like product consisting of NBR, coextensive with the scope of the investigations.[25]

The record in the final phase of the investigations contains no new information that would warrant revisiting the definition of the domestic like product from the preliminary determinations.[26] Moreover, no party has argued for a definition of the domestic like product different from that in the preliminary determinations.[27] Accordingly, we again define a single domestic like product consisting of NBR, coextensive with the scope of the investigations.

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[23] *Acrylonitrile-Butadiene Rubber (NBR) from France, Korea, and Mexico*, Inv. Nos. 731-TA-1567-1569 (Preliminary), USITC Pub. 5227 (Aug. 2021) ("Preliminary Determinations") at 8-12. Specifically, the Commission found that all NBR corresponding to the scope shares the same basic chemistry, is produced using common manufacturing facilities, production processes, and employees, and is sold through the same channels of distribution. *Id*. While the Commission acknowledged that differences in form, ACN content, and Mooney viscosity may affect the physical properties, prices, and desirability for certain end uses of different types of NBR, it found that customers and producers nevertheless generally perceive all NBR products corresponding to the scope as comprising a single product category. *Id*. at 12. The Commission also acknowledged that U.S. importers' questionnaire responses were mixed regarding the interchangeability between NBR and XNBR but found that the overall record did not indicate a clear dividing line that would warrant defining NBR and XNBR as separate domestic like products. *Id*.

[24] Preliminary Determinations, USITC Pub. 5227 at 8-12. Specifically, the Commission found clear lines dividing NBR from out-of-scope latex NBR and HNBR in terms of physical characteristics and end uses, interchangeability, producer and customer perceptions, and price. *Id*. at 12.

[25] Preliminary Determinations, USITC Pub. 5227 at 12.

[26] *See generally* CR/PR at I-9-12.

[27] Zeon argues that the Commission should define a single domestic like product, coextensive with Commerce's scope, as it did in its preliminary determinations. Zeon's Prehearing Br. at 3-5. Several respondents confirmed at the Commission's hearing that they are not requesting that the Commission reconsider the definition of the domestic like product from the preliminary determinations. *See* Hearing Transcript ("Tr.") at 244 (Mills on behalf of Arlanxeo; Kendler on behalf of Kumho; and Sjoberg on behalf of Negromex). The other respondents did not address the issue.

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[28] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

In its preliminary determinations, the Commission found that the preliminary phase record of these investigations raised no domestic industry issues, and defined the domestic industry as all U.S. producers of NBR, namely Zeon.[29] The final phase record of these investigations likewise raises no domestic industry issues,[30] and no party has argued for a definition of the domestic industry different from that in the preliminary determinations.[31] Accordingly, we again define the domestic industry as all U.S. producers of NBR, namely Zeon.[32]

[28] 19 U.S.C. § 1677(4)(A).

[29] Preliminary Determinations, USITC Pub. 5227 at 13.

[30] The record in the final phase of these investigations, like the record in the preliminary phase, indicates that Zeon ***. CR/PR at III-3, n.3. However, as in the preliminary phase, no party argues that *** should be included in the domestic industry, and the record does not contain information sufficient to assess whether ***.

[31] Non-party Dayco, citing the related parties provision of the statute, argues that Zeon should not be considered a domestic producer because it is primarily an importer of NBR from its parent company in Japan. Dayco's Non-Party Statement at 12-14. Zeon is related to a producer of nonsubject merchandise and is not related to an exporter of subject merchandise, and is not itself an importer of subject merchandise; thus, it is not subject to the related parties provision. 19 U.S.C. § 1677(4)(B).

[32] Another U.S. firm, Lion Elastomers ("Lion"), has indicated that it will soon start domestic production of NBR. CR/PR at III-1, n.1. However, it has also stated that the construction date for its NBR facility has ***, and respondents have raised questions as to whether Lion will produce in-scope NBR or out-of-scope latex NBR. *See* CR/PR at III-1, n.1; Kumho's Final Comments at 1, n.3.

IV. Cumulation[33]

For purposes of evaluating the volume and effects for a determination of material injury by reason of subject imports, section 771(7)(G)(i) of the Tariff Act requires the Commission to cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

(1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;

(2) the presence of sales or offers to sell in the same geographic markets of subject imports from different countries and the domestic like product;

(3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and

(4) whether the subject imports are simultaneously present in the market.[34]

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for

[33] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than three percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall generally be deemed negligible. 19 U.S.C. §§ 1673d(b), 1677(24)(A)(i).

Subject imports from France, Mexico, and South Korea accounted for *** percent, *** percent, and *** percent, respectively, of total U.S. imports of NBR in the 12-month period (June 2020 through May 2021) preceding the filing of the petitions. CR/PR at Table IV-4. As imports from each subject country exceed the statutory negligibility threshold, we find that subject imports from each country are not negligible.

[34] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1986), *aff'd*, *Fundicao Tupy, S.A. v. United States*, 678 F. Supp. 898 (Ct. Int'l Trade), *aff'd*, 859 F.2d 915 (Fed. Cir. 1988).

determining whether the subject imports compete with each other and with the domestic like product.[35] Only a "reasonable overlap" of competition is required.[36]

A. Arguments of the Parties

Zeon argues that the Commission should cumulate imports from all subject countries as it did in the preliminary determinations because the petitions were filed on the same day and there is a reasonable overlap of competition between and among the domestic like product and imports from each subject country.[37] Specifically, it contends that, in 2021, domestically produced NBR and NBR from each subject country were sold in the same forms and in the same ACN content ranges, and are thus fungible.[38] It also claims that domestically produced NBR and NBR from each subject country were sold through common channels of distribution; served the same geographic markets; and were present in every month of the January 2019 – December 2021 period of investigation ("POI").[39] Respondents do not address cumulation.

B. Analysis

We consider subject imports from France, Mexico, and South Korea on a cumulated basis because the statutory criteria for cumulation are satisfied. As an initial matter, Petitioner filed the antidumping duty petitions with respect to all three countries on the same day, June 30, 2021.[40] There also is a reasonable overlap of competition between subject imports from France, Mexico, and South Korea, and among subject imports from each source and the domestic like product, as discussed below.

Fungibility. The record indicates that subject imports from France, Mexico, and South Korea and the domestic like product overlap in terms of certain physical characteristics, including ACN content and form, and are interchangeable to some degree.

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[35] *See*, *e.g.*, *Wieland Werke, AG v. United State*s, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[36] The Statement of Administrative Action (SAA) to the Uruguay Round Agreements Act (URAA), expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." H.R. Rep. No. 103-316, Vol. I at 848 (1994) (*citing Fundicao Tupy, S.A. v. United States*, 678 F. Supp. at 902; *see Goss Graphic Sys., Inc. v. United States*, 33 F. Supp. 2d 1082, 1087 (Ct. Int'l Trade 1998) ("cumulation does not require two products to be highly fungible"); *Wieland Werke, AG*, 718 F. Supp. at 52 ("Completely overlapping markets are not required.").

[37] Petitioner's Prehearing Br. at 6-7.

[38] Petitioner's Prehearing Br. at 7.

[39] Petitioner's Prehearing Br. at 7.

[40] CR/PR at I-1. None of the statutory exceptions to cumulation applies.

Domestically produced NBR and imports from each subject country overlap in terms of ACN content. *** of the domestically produced NBR sold in 2021, and *** of the imports from each subject country sold that year, were in the 26 to 41 percent ACN range.[41] Moreover, *** and imports from *** were also sold in the below 26 percent ACN range that year.[42]

Domestically produced NBR and imports from each subject country also overlap in terms of form. *** of the domestically produced NBR sold in 2021, and *** of the imports from each subject source sold that year, were in bale/slab form.[43] Moreover, *** and imports from *** were also sold in ground form that year.[44]

While responding producers, importers, and purchasers differed concerning the degree of interchangeability between and among the domestic like product and subject imports from each source,[45] majorities or pluralities of responding purchasers rated domestically produced NBR as comparable to subject imports from each source with respect to at least 17 of 18

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[41] CR/PR at Table IV-10.

[42] CR/PR at Table IV-10.

[43] CR/PR at Table IV-9.

[44] CR/PR at Table IV-9. However, only *** additionally reported selling NBR in liquid form that year. *Id*.

[45] In comparing the domestic like product with subject imports from France, *** U.S. importers reported that they were always or frequently interchangeable, while 20 of 25 purchasers reported that they were sometimes or never interchangeable. CR/PR at Tables II-14-15. Zeon, the sole U.S. producer, reported that they were *** interchangeable. *Id*. at II-27.

In comparing the domestic like product with subject imports from Mexico, *** U.S. importers reported that they were always or frequently interchangeable, while 15 of 20 U.S. purchasers reported that they were sometimes or never interchangeable. CR/PR at Tables II-14-15. Zeon reported that they were *** interchangeable. *Id*. at II-27.

In comparing the domestic like product with subject imports from South Korea, *** U.S. importers reported that they were always or frequently interchangeable, while 11 of 19 U.S. purchasers reported that they were sometimes or never interchangeable. CR/PR at Tables II-14-15. Zeon reported that they were *** interchangeable. *Id*. at II-27.

In comparing subject imports from France with subject imports from Mexico, *** U.S. importers reported that they were always or frequently interchangeable, while 17 of 21 U.S. purchasers reported that they were sometimes or never interchangeable. CR/PR at Tables II-14-15. Zeon reported that they were *** interchangeable. *Id*. at II-27.

In comparing subject imports from France with subject imports from South Korea, *** U.S. importers reported that they were always or frequently interchangeable, while 11 of 17 U.S. purchasers reported that they were sometimes or never interchangeable. CR/PR at Tables II-14-15. Zeon reported that they were *** interchangeable. *Id*. at II-27.

In comparing subject imports from Mexico with subject imports from South Korea, *** U.S. importers reported that they were always or frequently interchangeable, while 11 of 16 U.S. purchasers reported that they were sometimes or never interchangeable. CR/PR at Tables II-14-15. Zeon reported that they were *** interchangeable. *Id*. at II-27.

purchasing factors.[46] We also note that, although Zeon manufactures NBR in the United States exclusively using batch processing,[47] whereas several producers in subject countries exclusively (or nearly exclusively) manufacture NBR using continuous processing, 7 of 10 responding importers, 15 of 24 responding purchasers, and *** all indicated that NBR produced using batch processing and NBR produced using continuous processing are substitutable.[48] [49]

We thus find that subject imports from each source and the domestic like product are sufficiently fungible for purposes of cumulation.

Channels of Distribution. Domestically produced NBR and imports from each subject country were sold in overlapping channels of distribution over the POI, namely to *** and ***.[50]

Geographic Overlap. *** and imports from *** were sold in all contiguous regions of the United States during the POI.[51]

Simultaneous Presence in Market. Domestically produced NBR and imports from each subject country were simultaneously present in the U.S. market throughout the POI.[52]

Conclusion. Because the relevant antidumping duty petitions were filed on the same day, and because the record indicates that there is a reasonable overlap of competition between and among imports from each subject country and the domestic like product, we

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[46] Majorities or pluralities of purchasers rated the domestic like product and subject imports from France as comparable with respect to all 18 purchasing factors; majorities or pluralities of purchasers rated the domestic like product and subject imports from Mexico as comparable with respect to all 18 purchasing factors; and majorities of purchasers rated the domestic like product and subject imports from South Korea as comparable with respect to 17 of 18 purchasing factors. CR/PR at Table II-13.

[47] Zeon's parent company, Zeon Corporation (Japan), produces NBR in Japan using continuous processing. *See* Zeon's Prehearing Br. at 13-14; Zeon's Posthearing Br. at 1; Tr. at 135 (Cail).

[48] *See* CR/PR at I-15-16 & II-23. In continuous processing, producers feed input monomers into a series of linked reactors to generate NBR, whereas in batch processing, producers feed input monomers into separate reactors that are not linked in a series. CR/PR at III-6, n.7. Batch processing allows for smaller runs than continuous processing, and is more expensive, but adds to production versatility. *Id*. at II-1 & II-6, n.14.

[49] We recognize that several responding purchasers indicated that they could not successfully switch from NBR imports produced via continuous processing to domestically produced NBR produced via batch processing due to quality or consistency issues with the latter product. *See*, *e.g.*, Tr. at 153-154 (Hart) and 169 (Clunk). *See also* affidavits of same at Exhibits 1 and 3 to Kumho's Prehearing Br., and attachments thereto.

[50] CR/PR at Table II-1. However, while subject imports from France, Mexico, and South Korea were sold to *** during the POI, domestically produced NBR was not. *Id*.

[51] CR/PR at Table II-2.

[52] CR/PR at Table IV-12 & Tables V-4-8.

cumulate subject imports from France, Mexico, and South Korea for purposes of our analysis of whether the domestic industry is materially injured by reason of subject imports.

V. No Material Injury by Reason of Subject Imports

Based on the record in the final phase of these investigations, we find that an industry in the United States is not materially injured by reason of imports of NBR from France, Mexico, and South Korea that Commerce has found to be sold at less than fair value.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[53] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[54] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[55] In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[56] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[57]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[58] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[59] In identifying a

[53] 19 U.S.C. §§ 1671d(b), 1673d(b).

[54] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[55] 19 U.S.C. § 1677(7)(A).

[56] 19 U.S.C. § 1677(7)(C)(iii).

[57] 19 U.S.C. § 1677(7)(C)(iii).

[58] 19 U.S.C. §§ 1671d(b), 1673d(b).

[59] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[60]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[61] In performing its examination, however, the Commission need not isolate

[60] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[61] Uruguay Round Agreements Act Statement of Administrative Action (SAA), H.R. Rep. 103-316 vol. I at 851-52 (1994) ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

the injury caused by other factors from injury caused by unfairly traded imports.[62] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[63] It is clear that the existence of injury caused by other factors does not compel a negative determination.[64]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports."[65] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other

[62] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[63] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[64] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

[65] *Mittal Steel*, 542 F.3d at 876 &78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology."), *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

sources to the subject imports."[66] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[67]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[68] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[69]

B. Conditions of Competition and the Business Cycle[70]

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

1. Demand Conditions

U.S. demand for NBR depends on U.S. demand for the downstream products in which it is used, such as hoses, walk-off mats, compounds, polyvinyl chloride, belts, wire, and cables.[71] Automotive, oil and gas, and industrial machinery customers typically demand costlier specialty grades of NBR with high or low ACN contents, while walk-off mats and commercial printing

[66] *Mittal Steel*, 542 F.3d at 873 (*quoting from Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[67] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[68] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[69] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[70] The record indicates that Zeon internally consumed NBR to produce ***. CR/PR at III-9. We thus consider the applicability of the statutory captive production provision. 19 U.S.C. § 1677(7)(C)(iv). We find that the threshold criterion for the application of the provision is not met because internal transfers, which accounted for between *** percent and *** percent of the domestic industry's U.S. shipments of NBR during the POI, did not constitute a significant portion of production during that time. *See* CR/PR at Table III-7.

[71] CR/PR at II-10 and Petitioner's Prehearing Br. at 19.

customers typically demand less expensive commodity grades of NBR with more moderate ACN contents.[72]

The parties, including Zeon, generally agree that U.S. demand for NBR declined from 2019 to 2020 due to the COVID-19 pandemic, then rebounded in 2021.[73] Other market participants likewise noted the deterioration in demand from 2019 to 2020 from the effects of the COVID-19 pandemic, and the recovery in demand from 2020 to 2021 as these effects abated.[74]

Apparent U.S. consumption of NBR decreased from 110.4 million pounds in 2019 to a period low of 86.8 million pounds in 2020, before increasing to 101.7 million pounds in 2021, a level 7.8 percent lower than in 2019.[75]

Regarding future demand, IHS Markit, a market research firm, projects that U.S. consumption of NBR will increase from 2021 to 2026 in most end-use categories.[76] The parties commenting on this issue, including Zeon, likewise project that U.S. demand for NBR will continue to increase from its 2021 levels.[77]

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[72] CR/PR at II-1-2; Exhibit 1 of Kumho's Prehearing Br. at paragraph 5 (affidavit of ***); Exhibit 5 of Kumho's Prehearing Br. at paragraph 5 (affidavit of ***); Exhibit 3 of Kumho's Prehearing Br. at paragraph 5 (affidavit of ***).

We note that, while Zeon defines commodity grade NBR as NBR with an ACN content of between 26 and 41 percent (and specialty grade NBR as NBR with an ACN content of less than 26 or more than 41 percent), respondents have stated that commodity grade NBR typically has an ACN content of between 31 and 35 percent (and that specialty grade NBR typically has an ACN content of less than 31 or more than 35 percent). CR/PR at I-12, n.39; *see* Exhibit 2 to Kumho's Prehearing Br. at 42.

[73] Petitioner's Prehearing Br. at 19; Zeon's U.S. producers' questionnaire response at II-2b; Arlanxeo's Prehearing Br. at 11; Kumho's Prehearing Br. at 3.

[74] CR/PR at II-11. *See also* CR/PR at IV-4 (importer *** reported that demand was strong in 2019, then dipped during the COVID-19 lockdowns, and then spiked after the COVID-19 lockdowns were lifted; importer *** cited COVID-19 as the reason for its "U-shaped" importing trend over the POI).

[75] CR/PR at Tables IV-13 and C-1. *** reported variously that U.S. demand for NBR did not change during the POI, or that it fluctuated during the period. CR/PR at Table II-4; Petitioner's Prehearing Br. at 19. Most responding importers, as well most responding U.S. purchasers, reported that U.S. demand for NBR increased or did not change during the POI. CR/PR at Table II-4.

[76] CR/PR at Table VII-23.

[77] Petitioner's Prehearing Br. at 19; Arlanxeo's Prehearing Br. at 12.

2. Supply Conditions

i. Zeon

Zeon, based in Louisville, Kentucky, is the sole U.S. producer of NBR.[78] It was the third largest source of supply throughout the POI, accounting for a smaller share of the U.S. NBR market than either subject or nonsubject imports; its market share increased in each year of the POI.[79] Specifically, Zeon's share of apparent U.S. consumption increased from *** percent in 2019 to *** percent in 2020 and to *** percent in 2021.[80] Zeon's production capacity remained at *** pounds in each year of the POI.[81]

Numerous purchasers reported that Zeon experienced supply constraints during the POI.[82] Consistent with this reporting, ***,[83] as well as ***.[84]

As discussed in section IV.B. above, Zeon produces NBR in the United States exclusively using batch (as opposed to continuous) processing.[85] [86] Batch processing allows for smaller

[78] CR/PR at I-1 and Table III-1.

[79] CR/PR at Table IV-13.

[80] CR/PR at Table IV-13.

[81] CR/PR Table III-4.

[82] CR/PR at II-9. *See also* CR/PR at Appendix E (showing that 14 purchasers – ***, ***, ***, ***, ***, ***, ***, ***, ***, ***, ***, ***, ***, and *** – described Zeon as experiencing supply constraints before and/or after the petitions were filed); Tr. at 152 (Hart) ("… no U.S. producer … can meet our needs in terms of quality or quantity.") and 150 (Kuczynski) ("Zeon … have recently admitted their inability to support our required volumes of NBR.").

[83] CR/PR at II-8; Zeon's Producer Questionnaire Response at IV-17.

[84] CR/PR at III-3; Zeon's Producer Questionnaire Response at II-2b.

[85] CR/PR at I-15.

[86] In contrast, the NBR that Zeon sources from its parent company is generally produced using the continuous process. Tr. at 69-70 (Cail) ("Non-subject imports from Japan, most of that volume is produced on a continuous line."); *see also id*. at 185 (Kendler) ("Zeon USA makes the choice to supply certain grades of NBR from Kentucky using batch processing, and to import from Japan other grades, using continuous processing."), 33 (Cail), and 172-173 (Crowe).

runs than continuous processing, and is more expensive, but adds to production versatility.[87]

ii. Cumulated Subject Imports

Cumulated subject imports were the largest source of supply to the U.S. market throughout the POI; their market share declined in each year of the period. Specifically, cumulated subject imports' share of apparent U.S. consumption decreased from 62.5 percent in 2019 to 61.3 percent in 2020 and to 60.6 percent in 2021.[88] Responding importers of subject merchandise reported that they had experienced supply constraints during the POI, and 25 of 36 responding purchasers reported issues with the availability of supply from subject sources.[89]

As discussed in section IV.B. above, several NBR producers in subject countries produce NBR exclusively, or almost exclusively, using continuous processing.[90] Based on the pricing data, *** of the cumulated subject imports sold during the POI had an ACN content ranging between 31 and 35 percent.[91]

iii. Nonsubject Imports

Nonsubject imports were the second largest source of supply to the U.S. market throughout the POI; their market share increased in each year of the period. Specifically,

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[87] CR/PR at II-1 & II-6, n.14 Zeon and respondents disagree as to how much more expensive batch processing is than continuous processing, with Zeon claiming that the differential is small, and respondents claiming that the differential is larger. *See, e.g.*, Annex II to Petitioner's Posthearing Br. at 21 (claiming a *** percent differential); Negromex's Prehearing Br. at 6 (claiming a 10-15 percent differential); Responses to Commissioner Questions appended to Arlanxeo's Posthearing Br. at 28 (claiming a *** percent differential); Kumho's Final Comments at 3 (claiming a *** percent differential). The record generally supports respondents' claims that batch processing entails significantly higher production costs than continuous processing, including in communications from Zeon to its customers. For example, in communications with purchaser ***, Zeon acknowledges its ***. *See* Exhibit I-4 to Zeon's Posthearing Br. Similarly, in describing the costs associated with its sales to purchaser ***, Zeon lists the "base cost" of ***, which it has elsewhere stated is produced by its parent company by continuous processing in Japan, at ***, whereas it lists the "base cost" of ***, which it has elsewhere stated that it produces by batch processing in Kentucky, at ***. *See* Annex III to Petitioner's Posthearing Br. at 18 and 21; Exhibit I-1 to Petitioner's Posthearing Br. Furthermore, Arlanxeo, which produces NBR using both batch and continuous processing, provided its actual costs for both processes, showing that its total per kilogram manufacturing costs for continuous processing in 2021 were *** EUR/KG, whereas its total per kilogram manufacturing costs for batch processing that year were *** EUR/KG, a difference of over 50 percent. *See* Responses to Commissioner Questions appended to Arlanxeo's Posthearing Br. at 28.

[88] CR/PR at Table IV-13.

[89] CR/PR at II-8-9; *see also* Appendix E.

[90] CR/PR at I-16, Table VII-5 & Table VII-11.

[91] CR/PR Table V-9.

nonsubject imports' share of apparent U.S. consumption increased from *** percent in 2019 to *** percent in 2020 and to *** percent in 2021.[92] Japan was the largest source of nonsubject imports, accounting for more than 70 percent of nonsubject imports during the POI.[93]

In addition to supplying the U.S. market with domestically produced NBR, Zeon also supplies the U.S. market with nonsubject NBR that it imports from its parent company in Japan, which utilizes continuous processing.[94] Zeon accounted for *** nonsubject imports of NBR from Japan during the POI.[95] Based on the pricing product data, *** of the nonsubject imports from Japan that Zeon sold over the POI had an ACN content ranging between 31 and 35 percent, corresponding to commodity grade NBR, whereas *** of the domestically produced NBR that Zeon sold over this time had ACN contents below 31 percent and above 35 percent.[96]

3. Substitutability and Other Conditions

We find that there is a moderate degree of substitutability between the domestic like product and subject imports.[97] While majorities or pluralities of responding purchasers reported that the domestic like product and subject imports from each source were comparable with respect to at least 17 of 18 purchasing factors,[98] most responding purchasers also reported that the domestic like product and subject imports from each source were only sometimes or never interchangeable.[99] Moreover, the vast majority of both responding importers and purchasers reported that NBR with ACN content in the 31 to 35 percent range (which covers *** of the subject imports sold during the POI) is only sometimes or never

[92] CR/PR at Table IV-13.

[93] CR/PR at II-7.

[94] CR/PR at IV-2, n.6; Zeon's Prehearing Br. at 13-14 and 29; Tr. at 135 (Cail). Zeon also imports nonsubject NBR from Taiwan. *See* CR/PR at III-2; Tr. at 32-33 (Cail).

[95] CR/PR at IV-2, n.6.

[96] CR/PR at Tables V-9 & G-1-4. Consistent with these data, a Zeon representative testified at the hearing that only "about 30 percent of Zeon's {domestically produced} supply is in that 31 to 35 ACN bucket." *See* Tr. at 59 (Arkan). Likewise, Zeon in its Posthearing Brief references its "domestic supply problem in the 31≤ACN≤35 band." *See* Annex III to Petitioner's Posthearing Br. at 20.

[97] CR/PR at II-16.

[98] CR/PR at Table II-13. We also observe that a substantial minority of responding purchasers consistently reported that the domestic like product was inferior to subject imports from each source across most purchasing factors. *Id.*

[99] CR/PR at Table II-15. Specifically, 20 of 25 purchasers reported that subject imports from France and domestically produced NBR are only sometimes or never interchangeable, 15 of 20 purchasers reported that subject imports from Mexico and domestically produced NBR are only sometimes or never interchangeable, and 11 of 19 purchasers reported that subject imports from South Korea and domestically produced NBR are only sometimes or never interchangeable. *Id*.

interchangeable with NBR with ACN contents in other percentile ranges (which covers *** of the domestically produced NBR sold during the POI).[100] Further limiting the interchangeability of domestically produced NBR and subject imports, most responding purchasers (30 of 38) reported that they must certify NBR from new suppliers, with purchasers indicating that on average, certification takes more than six months.[101] Thus, purchasers that had only certified subject sources of NBR could not rapidly switch to purchasing domestically produced NBR, and vice versa.

Zeon argues that domestically produced NBR and imports from each subject source are highly substitutable. It contends that the Commission's pricing product data, Zeon's communications with its customers, and a worksheet listing domestically produced grades that are equivalent to subject imported grades, demonstrate "head-to-head" competition between the domestic like product and subject imports.[102] The evidence in the record, however, does not support Zeon's argument.

Regarding the pricing data, as previously discussed, these data reflect that *** reported subject import sales have an ACN content in the 31 to 35 percent range, whereas *** reported

[100] CR/PR at Tables II-11 & V-9. Specifically, 11 of 12 importers and 33 of 34 purchasers reported that NBR in the 31 to 35 percent ACN range is only sometimes or never interchangeable with NBR in either the less than 26 percent range or the greater than 41 percent range. CR/PR at Table II-11. Similarly, 10 of 12 importers and 33 of 34 purchasers reported that NBR in the 31 to 35 percent ACN range is only sometimes or never interchangeable with NBR in either the 26 to 31 percent range or the 35 to 41 percent range. *Id*.

[101] CR/PR at II-21. Zeon contends that responding purchasers have "meaningfully overstated the difficulty of the certification/qualification process," arguing that, in its experience, certification is "a standard and relatively rapid process." Petitioner's Prehearing Br. at 24. However, neither Zeon nor the record provides any indication that the purchasers reporting on this issue lacked a basis for their assessments, which they have certified as accurate. Although Zeon cites several instances of customers readily changing suppliers notwithstanding purported certification/qualification impediments, *see*, *e.g.*, Annex I of Petitioner's Posthearing Br. at 6-7, Exhs. I-4-6, III-10, this evidence does not outweigh other information on the record covering a large and varied sample of purchasers. *See* CR/PR at II-21.

[102] Petitioner's Prehearing Br. at 21-22; Petitioner's Posthearing Br. at 3-4; Annex III to Petitioner's Posthearing Br. at 17-18; Exhibit III-1 to Petitioner's Posthearing Br.

sales of domestically produced NBR have ACN contents in other percentile ranges.[103] As also previously discussed, the vast majority of both responding importers and purchasers reported that NBR with ACN content in the 31 to 35 percent range is only sometimes or never interchangeable with NBR with ACN contents in other percentile ranges.[104] Moreover, Zeon itself reported that NBR with ACN content in the 31 to 35 percent range is *** interchangeable with NBR with ACN content in either the less than 26 percent range or the greater than 41 percent range – *i.e.*, NBR products corresponding to Pricing Product 4, which comprised *** percent of Zeon's reported sales of pricing products during the POI.[105] Thus, the pricing product data do not reflect a high degree of substitutability between domestically produced and subject imported NBR.

Nor do Zeon's communications with its customers show a high degree of substitutability between domestic and subject NBR. Although Zeon contends that these communications show "U.S. purchasers … discuss{ing} switching from NBR grades supplied via subject imports to NBR grades supplied by the domestic industry,"[106] many of the communications appear to concern NBR imported by Zeon from its parent company in Japan, and the source of the NBR referenced by Zeon in other communications is unclear.[107] Furthermore, many purchasers, including

[103] CR/PR at Table V-9. Product 1, with an ACN range of 31 to 35 percent, accounted for *** percent of reported subject import sales but only *** percent of Zeon's reported sales of domestically produced NBR. *Calculated from* CR/PR at Table V-9. *See also* CR/PR at Table IV-10 (showing that NBR with an ACN range of 31 to 35 percent accounted for *** percent of subject import U.S. shipments in 2021, but only *** percent of Zeon's U.S. shipments); Tr. at 59 (Arkan) (" … about 30 percent of Zeon's supply is in that 31 to 35 ACN bucket … where subject imports make about 70 percent of their total supply."). *See also* Annex III to Petitioner's Posthearing Br. at 21 ("The reason that subject imports were able to expand their market share in the 31≤ACN≤35 band is … because … foreign producers predominantly produce NBR grades in this ACN band … .").

[104] CR/PR at Table II-11.

[105] CR/PR at Tables II-11 and V-9.

[106] Zeon's Posthearing Br. at 3.

[107] For example, one of the "interaction reports" (*i.e.*, summaries of purchaser communications) that Zeon references as corroborating a high degree of substitutability between subject imports and Zeon's domestically produced NBR in fact refers to ***. *See* Exhibit III-8 to Petitioner's Posthearing Br. Likewise, another interaction report Zeon cites for this proposition references ***, which Zeon has elsewhere stated is produced by its parent company in Japan. *See* Annex III to Petitioner's Posthearing Br. at 21 and Exhibit III-10 to Petitioner's Posthearing Br. Moreover, a third interaction report that Zeon cites in support of its contention refers to ***, an NBR product Zeon explicitly acknowledges it does not produce in the United States. *See* Annex III of Petitioner's Posthearing Br. at 16; Exhibit III-9 of Petitioner's Posthearing Br.

purchasers referenced in Zeon's communications with its customers (such as *** and ***), have indicated that Zeon does not domestically produce the NBR grades they require.[108]

Finally, regarding Zeon's worksheet, we observe that this document reflects that Zeon ***,[109] and that ***.[110] Moreover, as Zeon has acknowledged, *** of its domestic production is of NBR with ACN content lower than 31 percent or higher than 35 percent, whereas *** subject imports have ACN content between 31 and 35 percent,[111] indicating that there is limited overlap between the NBR that is actually produced domestically and subject imports. Further, even if there were domestic equivalents for all or most subject imported grades of NBR, as Zeon claims,[112] the record indicates that purchasers could not have readily substituted these domestic equivalents for subject imports because Zeon's use of batch processing and its supply constraints would have limited its ability to produce such equivalents in sufficient quantities.[113]

We find that price is an important factor in purchasing decisions for NBR, and that non-price factors, such as quality, availability, and performance/product meets specifications, are also important.[114] Responding purchasers cited quality, availability, and price most frequently as being among the top three factors influencing their purchasing decisions,[115] and cited

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[108] *See* CR/PR at II-29 ("{M}ultiple purchasers listed exact grades for which they were unable to use domestic equivalents. Others noted that, generally, there were no domestic substitutes for the grades that they use."); Exhibit 3 to Kumho's Prehearing Br. at paragraph 9 (affidavit of ***"); Exhibit 5 to Kumho's Prehearing Br. at paragraph 10 (affidavit of ***"). *See also* Tr. at 169 (Clunk) ("the majority of our nitrile purchases from Zeon were from Nippon Zeon in Japan because many of the nitrile grades that we purchase from Zeon are not produced in Kentucky; rather, only in Japan.").

These purchasers generally attributed their inability to procure certain grades of NBR from Zeon to Zeon's exclusive use of batch processing in the United States. *See*, *e.g.*, Tr. at 153-154 (Hart); Tr. at 172 (Crowe).

[109] Exhibit III-1 to Petitioner's Posthearing br.; Annex III to Petitioner's Posthearing Br. at 16-17.

[110] CR/PR at II-28, n.28.

[111] Tr. at 59 (Arkan) (" … about 30 percent of Zeon's supply is in that 31 to 35 ACN bucket … where subject imports make about 70 percent of their total supply."). *See also* Annex III to Petitioner's Posthearing Br. at 21 ("The reason that subject imports were able to expand their market share in the 31≤ACN≤35 band is … because … foreign producers predominantly produce NBR grades in this ACN band … .").

[112] Zeon's Prehearing Br. at 22.

[113] *See* CR/PR at II-8 and Appendix E; Attachment 5 to Exhibit 1 to Kumho's Prehearing Br. (email from Zeon to a customer stating that, ***). *See also* *** US Purchasers' Questionnaire Response at III-12 ("***"); Tr. at 152 (Hart) ("no U.S. producer that can meet our needs in terms of … quantity").

[114] CR/PR at Table II-8.

[115] The number of firms (25 each) that ranked quality and availability as being among the top three factors influencing their purchasing decisions was greater than the number of firms (24) that

performance/product meets specifications most frequently as their first-most important purchasing factor.[116] Price was a factor that many responding purchasers cited as being very important to their purchasing decisions, although a greater number of purchasers cited availability, reliability, consistency, meets customer specifications, certification, and quality meets industry standards as very important purchasing factors.[117] Most purchasers (22 of 38) reported that that they only sometimes purchase NBR at the lowest price, while eight reported that they never do so, and one reported that it always does so.[118]

NBR is primarily sold from inventory, with lead times averaging *** days for Zeon and *** days for importers of the subject product.[119] Zeon sells domestically produced NBR on a ***.[120] The company sells most of its domestically produced NBR ***, and sells the remainder through ***.[121] A majority (10 of 13) of responding importers reported selling subject imports on a transaction-by-transaction basis, followed by contracts (six), other methods (four), and price lists (two).[122] Most subject imports were sold on the spot market or through annual contracts, with most of the remainder sold through long-term contracts and a smaller percentage sold through short-term contracts.[123]

The main raw materials used to produce NBR are ACN and butadiene. Raw materials as a share of cost of goods sold ("COGS") declined from *** percent in 2019 to *** percent in 2021.[124] ACN and butadiene prices both fluctuated but increased overall during the POI.[125]

(…Continued)
ranked price as being among the top three factors influencing their purchasing decisions. CR/PR at Table II-8.

[116] CR/PR at Table II-8.
[117] CR/PR at Table II-9.
[118] CR/PR at II-19.
[119] CR/PR at II-20.
[120] CR/PR at Table V-2.
[121] CR/PR at Table V-3.
[122] CR/PR at Table V-2.
[123] CR/PR at Table V-3.
[124] CR/PR at V-1.
[125] CR/PR at Figure V-1.

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[126]

We find that the volume of cumulated subject imports was significant, both absolutely and relative to U.S. consumption and production, over the POI.[127] Cumulated subject import volume decreased from 72.2 million pounds in 2019 to 54.1 million pounds in 2020, and then increased to 73.4 million pounds in 2021, a level 1.7 percent greater than in 2019.[128] U.S. importers' U.S. shipments of cumulated subject imports decreased from 69.0 million pounds in 2019 to 53.2 million pounds in 2020, and then increased to 61.6 million pounds in 2021, a level 10.7 percent lower than in 2019.[129] Cumulated subject imports' share of apparent U.S. consumption decreased from 62.5 percent in 2019 to 61.3 percent in 2020 and to 60.6 percent in 2021, a level 1.9 percentage points lower than in 2019.[130] Cumulated subject imports relative to U.S. production increased from *** percent in 2019 to *** percent in 2020 and to *** percent in 2021, a level *** percentage points greater than in 2019.[131]

We conclude that the volume of cumulated subject imports is significant both in absolute terms and relative to U.S. consumption and production. For the reasons discussed below, however, we do not find that cumulated subject imports had either significant price effects or a significant adverse impact on the domestic industry.

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[126] 19 U.S.C. § 1677(7)(C)(i).

[127] Zeon has argued that the Commission should reduce the weight it affords to the post-petition data in these investigations because, in its view, there was a "change in the import volume of {subject imports} due to the pendency of the investigation", citing a "slight increase" in domestic producer market share from 2019 to 2021. *See* Petitioner's Prehearing Br. at 32; 19 U.S.C. § 1677(7)(I). The record, however, shows that cumulated subject imports were roughly equivalent in volume in 2021 before and after the filing of the petitions, and, further, that cumulated subject import volume and U.S. shipments of cumulated subject imports increased overall from 2020 to 2021. CR/PR at Tables IV-2, IV-12, and IV-13. While cumulated subject imports' market share declined from 2020 to 2021, this was a continuation of a trend that predated the filing of the petitions, as cumulated subject imports' market share also declined from 2019 to 2020. CR/PR at Table IV-13. We therefore decline to accord reduced weight to the post-petition period or more broadly to 2021 data. We address alleged post-petition price effects in our price discussion below.

[128] CR/PR at Table IV-2.

[129] CR/PR at Tables IV-13 and C-1.

[130] CR/PR at Tables IV-13 and C-1.

[131] CR/PR at Table IV-2.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[132]

As addressed in section V.B.3., the record indicates that there is a moderate degree of substitutability between the domestic like product and subject imports, and that price is an important factor in purchasing decisions, among other important factors.

The Commission collected quarterly pricing data from U.S. producers and importers for five NBR products shipped to unrelated customers during the POI.[133] Zeon and nine importers (***) provided usable pricing data for sales of the requested products.[134] Pricing data reported by these firms accounted for *** percent of Zeon's U.S. shipments of domestically produced NBR, *** percent of U.S. shipments of subject imports from France, *** percent of subject imports from Mexico, and *** subject imports from South Korea in 2021.[135]

The price comparison data show that cumulated subject imports undersold the domestic like product in 131 of 144 quarterly comparisons, or 91.0 percent of the time, at

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[132] 19 U.S.C. § 1677(7)(C)(ii).

[133] CR/PR at V-7. The five pricing products are: (1) **Product 1**-- NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs; (2) **Product 2**-- NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, ground/particulate/pellet form, sold in 20-30 kg bags; (3) **Product 3**-- NBR with Acrylonitrile content greater than or equal to 26% (exclusive) and less than or equal to 31% (exclusive) or Acrylonitrile content greater than 35% (exclusive) and less than or equal to 41% (exclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs; (4) **Product 4** -- NBR with Acrylonitrile content less than 26% (inclusive) or Acrylonitrile content greater than 41% (inclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs; and (5) **Product 5** -- XNBR, any Acrylonitrile content, made from methacrylic acid, sold in bales or slabs ranging from 25-45 kgs. *Id.*

[134] Not all firms reported pricing for all products for all quarters. CR/PR at V-7. No importers reported pricing data for Product 2 from South Korea or Product 5 from Mexico or South Korea. *Id.*

[135] CR/PR at V-7-8. Pricing data reported by Zeon also accounted for *** percent of U.S. shipments of nonsubject NBR from Japan in 2021. CR/PR at G-3.

margins ranging between 0.9 and 67.3 percent, and averaging 34.6 percent.[136] Cumulated subject imports oversold the domestic like product in 13 of 144 quarterly comparisons, or 9.0 percent of the time, at margins ranging between 3.0 and 31.0 percent, and averaging 14.7 percent.[137] Quarters in which there was underselling accounted for 98.4 percent of the reported volume of cumulated subject import sales (*** pounds), and quarters in which there was overselling accounted for 1.6 percent of the reported volume of cumulated subject import sales (*** pounds).[138]

Although the price comparison data show predominant underselling by subject imports, Zeon did not lose market share or a significant volume of sales to subject imports as a result of their low prices. Notably, the domestic industry's share of apparent U.S. consumption increased *** percentage points over the POI, from *** percent in 2019 to *** percent in 2021.[139] Although 13 of 37 purchasers that responded to allegations of sales lost to subject imports reported that subject imports were priced lower than the domestic like product, only three of these 13 purchasers reported purchasing a total of *** pounds of subject imported

[136] CR/PR at Table V-10.
[137] CR/PR at Table V-11.
[138] CR/PR Tables V-10-11.
[139] CR/PR at Table C-1.

NBR instead of domestic NBR due to price.[140] These lost sales were equivalent to only *** percent of the *** pounds of the cumulated subject imports that responding purchasers reported purchasing during this period[141] and *** percent of apparent U.S. consumption during

[140] CR/PR at Table V-15. The volume of confirmed lost sales was revised from *** pounds in the prehearing staff report to *** pounds in the final report. *Compare* Prehearing Report at Table V-14 *with* CR/PR at Table V-15. This is because ***.

Zeon argues that the Commission should rely on the confirmed lost sales volume reflected in the prehearing staff report, *** million pounds, because there is in its view "meaningful evidence suggesting that the data {originally} provided by *** … was accurate." *See*, *e.g.*, Zeon's Final Comments at 11. In this respect, Zeon contends, among other things, that it was a "significant supplier" to *** when the lost sales occurred, and that it has provided "contemporaneous communications" between itself and *** showing that price was the "principal driver" of *** purchasing decisions. *Id*. at 11-12 and 12, n.55.

We rely on the volume of confirmed lost sales in the final report, *** pounds, for the following reasons. First, the volume of subject imports that *** reported purchasing instead of the domestic like product due to price over the POI in its original questionnaire response, *** pounds, was nearly equal to the entire volume of subject imports that *** reported purchasing over the period (*** pounds). *Compare* *** Original Purchaser Questionnaire Response at II-1 and II-3. *** total volume of subject import purchases could not constitute sales that Zeon lost due to price because *** reported that ***. *** Original Purchaser Questionnaire Response at III-14 and III-22.

Second, the original purchaser questionnaire response *** submitted was ***. ***, in the same original purchaser questionnaire response in which it reported purchasing subject imports over domestically produced NBR primarily due to price, also repeatedly indicated that other factors are more important than price in its purchasing decisions. *See* *** Original Purchaser Questionnaire at III-23 (***) and V-1 (***"). Following questions from the Commissioners at the hearing which ***, the Commission staff sought clarifications from *** concerning whether price was the primary factor for its decision to purchase subject imports rather than domestic NBR. In response to the inquiry, *** submitted a revised U.S. purchaser questionnaire response. *See*, *e.g.*, Tr. at 54-55 (Chair Kearns) (raising questions concerning the reported lost sales data – and requesting clarifications in the proprietary post-hearing briefs); CR/PR at V-27, n.28. The greater importance that *** places on non-price factors at several points in its original questionnaire response is consistent with its revised questionnaire response indicating that it purchased subject imports instead of domestic NBR for non-price reasons.

Third, *** revised questionnaire response indicating that it purchased subject imports instead of domestic NBR for non-price reasons is also consistent with its response in its original purchaser questionnaire that the decrease in its domestic NBR purchases was not due to price but rather a ***. *** Original Purchaser Questionnaire Response at II-2. Likewise, it reported that the increase in its purchases from its main subject import source, ***, was also not based on price, but rather ***. *Id*.

In sum, based on the evidence discussed above, we rely on *** revised questionnaire response indicating that it purchased subject imports instead of domestic NBR for reasons other than price.

[141] *Derived from* CR/PR Tables V-14-15.

the POI.[142] Other purchasers cited factors such as product availability, quality and consistency as their reasons for choosing subject imports.[143]

We have also examined price trends over the POI.[144] Zeon's sales prices fluctuated but increased overall for all five pricing products.[145] Zeon's sales prices for pricing products 1, 2, 3, 4, and 5 increased by *** percent, *** percent, *** percent, *** percent, and *** percent, respectively, over the POI.[146] The sales prices for imports from each subject country likewise increased overall over the POI for each pricing product for which data are available.[147] We also observe that none of the 16 responding purchasers reported that Zeon had reduced its prices to compete with lower priced subject imports from France, Mexico, or South Korea.[148] Zeon argues that there was "erosion" in the "conversion" component of its prices over the POI, and submitted its conversion prices for NBR with various ACN content levels in support.[149] The submitted data however reflect no clear trend over the POI, but generally show that the conversion component of its prices increased overall from 2019 to 2021 for NBR products in all

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[142] *Derived from* CR/PR Tables IV-13 and V-15. We have also considered that these sales were equivalent to *** percent of Zeon's *** pounds of commercial sales over the POI and to *** percent of Zeon's domestic shipments over the POI. *Derived from* CR/PR Tables IV-13, V-15, and VI-1.

[143] CR/PR at Table V-15.

[144] Zeon has argued that the Commission should reduce the weight it accords to post-petition data in these investigations because, in its view, there was a change in the price effects of subject imports after the filing of the petitions that was related to the pendency of the investigations. *See* Petitioner's Prehearing Br. at 16-17; Petitioner's Posthearing Br. at 10-11; Annex V to Petitioner's Posthearing Br. at 33; 19 U.S.C. § 1677(7)(I). Contrary to Zeon's argument, however, prices for both domestically produced NBR and subject imports generally began to increase prior to the filing of the petitions (filed on June 30, 2021), indicating that the filing of the petitions was not what prompted the upward trend in prices and that price increases after the filing of the petitions were continuations of preexisting trends. *See* CR/PR at Tables V-4-8. Moreover, the price increases from 2020 to 2021, when the petitions were filed, coincided with a 17.2 percent increase in apparent U.S. consumption, further corroborating that these increases were explained by factors other than the filing of the petitions. CR/PR at Table C-1.

[145] CR/PR at Tables V-4-8.

[146] *Derived from* CR/PR Tables V-4-8. We also note that the average unit values ("AUVs") of Zeon's net sales increased overall by *** percent over the POI. CR/PR at Table C-1.

[147] CR/PR at Tables V-4-8. As previously discussed, no importers reported pricing data for Product 2 from South Korea or Product 5 from Mexico or South Korea. CR/PR at V-7.

[148] CR/PR at V-27. Twenty purchasers replied that they did not know whether Zeon had reduced its prices to compete with subject imports. *See* purchasers' questionnaire responses at II-4a.

[149] Zeon's Posthearing Br. at 6-7 and Exhibit I-12. Zeon states that its prices in its annual and short-term contracts comprise three sub-components, one of which is the "conversion price," which covers all Zeon's non-monomer costs (fixed costs, which for Zeon includes labor, and non-monomer raw material costs) and includes a "built-in per unit profit margin." Petitioner's Prehearing Br. at 15; Petitioner's Posthearing Br. at 6-7, Annex I to Petitioner's Posthearing Br. at 5.

ACN content ranges.[150] In light of the above, we do not find that cumulated subject imports depressed prices for the domestic like product to a significant degree.[151]

Nor do we find that cumulated subject imports prevented price increases which

[150] CR/PR at Table V-13. Table V-13 reflects Zeon's reported conversion prices as it covers both non-monomer costs plus profit. *See* Zeon's Posthearing Br. at 6-7, Exhibit I-12. Zeon explains that its reported conversion prices by ACN levels are ***. *Id*. at Exhibit I-12, notes.

[151] We are unpersuaded by Zeon's argument that its purchaser communications and interaction reports demonstrate that subject imports depressed prices for Zeon's domestically produced NBR to a significant degree. *See* Annex I to Zeon's Posthearing Br. at 4-7 and exhibits I-2-9 to Petitioner's Posthearing Br. Many of these communications and interaction reports indicate that Zeon did not reduce its prices. For example, in a communication with purchaser ***, Zeon in response to pricing pressure states that *** of a domestically produced grade. *See* Exhibit I-4 to Zeon's Posthearing Br. Likewise, in an interaction report regarding talks with purchaser ***, Zeon both notes *** and states that ***. *See* Exhibit I-2 to Petitioner's Posthearing Br.

Furthermore, several of these communications and reports indicate that the Zeon NBR products being discussed were not domestically produced, but were rather nonsubject NBR from Japan. For example, in its communication with purchaser ***, Zeon discusses ***, a product it explicitly states ***." *See* Exhibit I-5 to Petitioner's Posthearing Br. Likewise, in its communication with purchaser *** it discusses ***, which, as previously discussed, Zeon states is produced by its parent company in Japan. *See* Annex III to Zeon's Posthearing Br. at 21 and Exhibit I-7.

Finally, to the extent that any of these purchaser communications and interaction reports show that Zeon reduced its prices to certain customers, this evidence does not outweigh other information on the record showing that domestic prices were not depressed to a significant degree, including the increase in domestic prices for all five pricing products over the POI, the increase in Zeon's conversion prices over the POI, the increase in the AUV of Zeon's U.S. shipments of domestic NBR, and the absence of any responding purchasers reporting that Zeon reduced its prices to compete with subject imports.

otherwise would have occurred to a significant degree.[152] [153] Zeon's COGS-to-net sales ratio declined overall during the POI, increasing from *** percent in 2019 to *** percent in 2020,

[152] We decline Zeon's invitation to base our analysis on what essentially amounts to an expansion of the POI and examine the domestic industry's COGS-to-net sales ratio from 2018 to 2021. *See* Zeon's Posthearing Br. at 12. Zeon denies that it is making such a request, and that it is only asking that the Commission consider Zeon's performance in 2018 to "contextualize both the depth and the persistent state of material injury that afflicted the U.S. industry from 2019 – 2021." *See* Zeon's Posthearing Br. at 12. To the extent that Zeon is requesting that we expand the POI, we observe that Zeon did not request that the final phase POI be expanded to include 2018 and did not provide a justification for the Commission departing from its traditional three-year period of investigation. Further, because in the preliminary phase of the investigations the Commission relied on official import statistics to calculate subject import volume and market share, while it relied on importer questionnaire data for the same data points in the final phase investigations, data on subject import volume and market share from the preliminary phase (which includes 2018 data) and from the final phase are not comparable. To the extent that Zeon only asks the Commission to consider its 2018 financial data, in particular its COGS-to-net sales ratio, as reported in the preliminary phase as context for evaluating its COGS-to-net sales ratio over the POI, we have considered that, but do not find it persuasive in establishing that subject imports suppressed domestic producer prices to a significant degree. In addition to the lack of other evidence supporting Zeon's price suppression argument, including the fact that its COGS-to-net sales ratio improved from 2019-2021, 2018 was a time of rising monomer costs and as Zeon itself explained, during times of rising monomer costs, its COGS-to-net sales ratio is expected to improve. Preliminary Staff Report at Figure V-1; Zeon Pre-Hearing Br. at 15. Zeon does not explain the extent to which its 2018 COGS-to-net sales ratio reflected, for example, rising monomer costs or other factors, for example, the presence of subject imports or their relative pricing in the market. As such, Zeon itself fails to provide context supporting its contention that the Commission should rely on its 2018 COG-to-net sales ratio to find that subject imports suppressed domestic producer prices during the POI.

As discussed above, we have reviewed the contemporaneous emails and documentation Zeon submitted in support of its assertion that it was repeatedly asked to lower its base price, and do not find they demonstrate that Zeon reduced its prices due to subject import pricing to a significant degree.

[153] Chairman Johanson also declines Zeon's invitation to base the analysis on what essentially amounts to an expansion of the POI and examine the domestic industry's COGS-to-net-sales ratio from 2018 to 2021. *See* Zeon's Posthearing Br. at 12. In its comments on the draft questionnaires, Zeon did not request that the final phase POI be expanded to include 2018, and the 2018 data collected in the preliminary phase of the investigations is not fully compatible with the 2019-2021 data collected in the final phase of the investigations. Furthermore, Zeon fails to explain how the Commission's reliance on the traditional three-year POI for which data were collected would undermine its analysis of subject import volume, price effects, and impact, other than to claim that expanding the POI to include 2018 would "contextualize both the depth and the persistent state of material injury that afflicted the U.S. industry from 2019 – 2021." *See* Zeon's Posthearing Br. at 12.

before declining to *** percent in 2021, a level *** percentage points below its 2019 level.[154] The decline in this ratio indicates that Zeon was successful in increasing its net sales AUVs by a greater amount than the increase in its unit COGS over the POI.[155] [156]

[154] CR/PR at Table VI-1. Zeon argued for the first time in its Posthearing Brief, filed June 8, 2022, that the Commission should use alternative financial data in its injury analysis, contending that the financial results Zeon had reported in its questionnaire response, and certified as accurate to the Commission (the "reported financial results"), were in fact "skewed" due to a finished goods inventory revaluation adjustment, and that removing this adjustment "allows for a more accurate illustration of Zeon's core business profitability." *See* Annex II to Petitioner's Posthearing Br. at 12-13; *see also* June 16, 2022 Verification Report of Jennifer Brinckhaus, financial analyst. Zeon provided in its Posthearing Brief, and during verification of its questionnaire response, alternative financial results that remove this adjustment (the "alternative financial results"). *See* Petitioner's Posthearing Br. at 15; Annex II to Petitioner's Posthearing Br. at 13; Staff Verification Report Worksheet 1. Based on its alternative financial results, Zeon argues that it experienced significant price suppression over the POI. *See* Petitioner's Posthearing Br. at 13-15; Zeon's Final Comments at 7. We rely on Zeon's reported financial results and not its alternative financial results for the following reasons.

First, the reported financial results were certified as accurate by a Zeon official and verified as accurate by Commission staff, using Zeon's audited financial records. Zeon has never retracted its certification of the accuracy of its reported financial results.

Second, the lateness of Zeon's request– first made in its posthearing brief – that the Commission substitute the alternative financial results for the financial results reported in its questionnaire response and included in the prehearing staff report prejudiced the ability of respondents to adequately respond to Zeon's new argument. At that point of the investigations, respondents could only respond to the argument in their final comments, which could not contain new factual information. *See Acrylonitrile-Butadiene Rubber (NBR) From France, Mexico, and South Korea; Scheduling of the Final Phase of Anti-Dumping Duty Investigations*, 87 Fed. Reg. 11481 (Mar. 1, 2022). Zeon could have reported its alternative financial results in an addendum to its March 31, 2022 questionnaire response, and argued they should be relied upon, if it determined that its reported financial results were misleading, but did not do so.

Third, contrary to Zeon's claim that Commission staff expressed a preference for its alternative financial results, Zeon's Final Comments at 4-5, the final report notes that Commission staff "***." CR/PR at VI-5, n.6. Commission staff also noted, however, that those results "***" *Id.* In other words, Commission staff explained that ***. Given this, the record does not support Zeon's contention that its adjusted financial results are a more accurate measure of its financial performance than its reported financial results, which tie to the company's audited financial statements, were certified as accurate by a Zeon official, and were verified by Commission staff.

In sum, we rely on Zeon's reported financial results and not its alternative financial results.

[155] Specifically, between 2019 and 2021, Zeon's net sales AUVs increased by $***, while its unit COGS increased by only $***. *Derived from* CR/PR Table C-1.

[156] Zeon asserts that it was repeatedly asked throughout the reporting period to lower the base price it charged its customers – even as its factory fixed and variable costs increased due to lower overall production and higher labor costs. Annex I to Petitioner's Posthearing Br. at 5; Petitioner's Prehearing Br. at 35. Zeon provides no citation to its base (conversion) prices nor its factory fixed or variable costs to support its assertion that its base price was lowering as its costs were increasing. Zeon includes in

In sum, we find that cumulated subject imports did not have significant price effects on the domestic like product during the POI.

E. Impact of the Subject Imports[157]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."[158] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development ("R&D"), and factors affecting domestic prices. No

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(…Continued)
Exhibit I-12 of its posthearing brief in response to Commissioner questions a list of its quarterly conversion prices. Petitioner's Posthearing Br. at Exhibit I-12. Zeon provides no discussion or data as to how the conversion prices it provided compare to conversion costs nor does it cite this exhibit anywhere in its posthearing brief. As discussed above, we have reviewed the contemporaneous emails and documentation Zeon submitted in support of its assertion that it was repeatedly asked to lower its base price, and do not find they demonstrate that Zeon reduced its prices due to subject import pricing. Further, Zeon fails to support its assertion with data on the record, for example, the conversion price data it included in Exhibit I-12 of its posthearing brief and how it views that data relating to its conversion costs and its arguments of price suppression.

[157] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determinations of sales at less value, Commerce found dumping margins of 81.86 percent for NBR from France, 18.45 percent for NBR from Mexico, and 18.80 percent–35.31 percent for NBR from South Korea. *See Acrylonitrile-Butadiene Rubber from France: Final Affirmative Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part,* 87 Fed. Reg. 37833 (Jun. 24, 2022); *Acrylonitrile-Butadiene Rubber from the Republic of Korea: Final Affirmative Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part,* 87 Fed. Reg. 37825 (Jun. 24, 2022)*;* and *Acrylonitrile-Butadiene Rubber from Mexico: Final Affirmative Determination of Sales at Less Than Fair Value,* 87 Fed. Reg. 37829 (Jun. 24, 2022). We take into account in our analysis the fact that Commerce has made final findings that all subject merchandise from France, Mexico, and South Korea is dumped. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices as reviewed above.

[158] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[159]

Although most measures of Zeon's performance weakened from 2019 to 2020, these declines coincided with a 21.4 percent decline in apparent U.S. consumption generally due to the COVID-19 pandemic.[160] As slowdowns resulting from the pandemic abated in 2021, and apparent U.S. consumption increased 17.2 percent, almost all measures of Zeon's performance recovered to levels at, near, or above those in 2019. Moreover, other measures of Zeon's performance remained stable or increased during the POI, notwithstanding the impact of the COVID-19 pandemic on apparent U.S. consumption.

Zeon's capacity remained stable at *** pounds in each year of the POI. Its production decreased from *** pounds in 2019 to *** pounds in 2020, before increasing to *** pounds in 2021. Zeon's capacity utilization followed the same trend as its production, declining from *** percent in 2019 to *** percent in 2020, and then increasing to *** percent in 2021.[161]

Zeon's U.S. shipments followed a similar trend as its production. Its U.S. shipments declined from *** pounds in 2019 to *** pounds in 2020, and then increased to *** pounds in 2021. Zeon's share of apparent U.S. consumption increased in every year of the POI, from *** percent in 2019 to *** percent in 2020 and to *** percent in 2021.[162]

Zeon's end-of-period inventories decreased from 2019 to 2021.[163] Its end-of-period inventories as a share of total shipments increased from 2019 to 2020, and then significantly decreased from 2020 to 2021, as it drew down inventories that had built up during the height of the COVID-19 pandemic.[164]

Zeon's employment-related indicators were relatively stable throughout the POI, notwithstanding the effects of the pandemic. The company had *** number of production related workers ("PRWs") in 2021 as in 2019.[165] While Zeon's hours worked declined over the

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[159] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act ("TPEA") of 2015, Pub. L. 114-27.

[160] CR/PR at Table C-1. Zeon has acknowledged that the COVID-19 pandemic reduced demand for NBR in 2020. Petitioner's Prehearing Br. at 19; Zeon's U.S. producers' questionnaire response at II-2b.

[161] CR/PR at Table III-4.

[162] CR/PR at Table IV-13.

[163] CR/PR at Table III-8. Zeon's end-of-period inventories decreased from *** pounds in 2019 to *** pounds in 2020 and to *** pounds in 2021. *Id*.

[164] CR/PR at Table III-8. Zeon's end-of-period inventories as a share of total shipments increased from *** percent in 2019 to *** percent in 2020, before decreasing to *** percent in 2021. *Id*.

[165] Zeon's employment was *** PRWs in 2019, *** PRWs in 2020, and *** PRWs in 2021. CR/PR at Table III-9.

POI, its wages paid increased irregularly, and its hourly wages increased in every year of the period.[166] Zeon's productivity decreased from 2019 to 2020, and then increased from 2020 to 2021.[167]

All measures of Zeon's financial performance declined from 2019 to 2020, and then increased from 2020 to 2021 to levels exceeding those in 2019.[168] Zeon's net sales value declined from $*** in 2019 to $*** in 2020, and then increased to $*** in 2021.[169] Its gross profits declined from $*** in 2019 to $*** in 2020, and then increased to $*** in 2021.[170] Zeon's operating income declined from $*** in 2019 to $*** in 2020, and then increased to $*** in 2021.[171] Its operating income margin declined from *** percent in 2019 to *** percent in 2020, and then increased to *** percent in 2021.[172]

Zeon's capital expenditures and R&D expenses declined irregularly during the POI.[173] Its return on assets declined from *** percent in 2019 to *** percent in 2020, and then increased to *** percent in 2021.[174] The domestic industry also reported actual and anticipated negative effects on investment, growth, and development due to subject imports.[175]

The record in the final phase of the investigations does not indicate that subject imports had a significant impact on Zeon during the POI. We have found that subject imports, though significant in terms of absolute volume and relative to consumption and production, did not cause the domestic industry to lose a significant volume of sales, prevent the domestic industry

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[166] CR/PR at Table III-9. Zeon's total hours worked decreased from *** hours in 2019 to *** hours in 2020 and to *** hours in 2021; its wages paid were $*** in 2019, $*** in 2020, and $*** in 2021; its hourly wages paid to PRWs increased from $*** in 2019 to $*** in 2020 and to $*** in 2021. *Id*.

[167] CR/PR at Table III-9. Zeon's productivity declined from *** pounds per hour in 2019 to *** pounds per hour in 2020, and then increased to *** pounds per hour in 2021. *Id*.

[168] For reasons previously discussed, we do not credit Zeon's alternative financial results, which reflect gross profits, operating incomes, and net incomes different from those reflected in Zeon's reported financial results. *See* CR/PR at VI-7, nn.14-15 and VI-8, n.18.

[169] CR/PR at Table VI-1.

[170] CR/PR at Table VI-1.

[171] CR/PR at Table VI-1.

[172] CR/PR at Table VI-1.

[173] CR/PR at Table VI-4. Its capital expenditures increased from $*** in 2019 to $*** in 2020, and then decreased to $*** in 2021; its R&D expenses decreased from $*** in 2019 to $*** in 2020, and then increased to $*** in 2021. *Id*.

[174] CR/PR at Table VI-4.

[175] CR/PR at Tables VI-6-7. The negative effects that Zeon references include, among other things, ***. CR/PR at Table VI-7. As discussed in section V.D. above, the record does not indicate that Zeon lost a significant volume of sales due to subject import pricing, or that subject imports depressed prices for the domestic like product to a significant degree.

from increasing its market share in every year of the POI, or have adverse price effects. Nor is there a clear correlation between trends in the volume and market share of subject imports and Zeon's performance during the POI. Zeon's performance generally declined from 2019 to 2020 despite a decline in subject import volume and market share during this period, and markedly improved from 2020 to 2021 despite an increase in subject import volume and predominant underselling during this period.[176] Indeed, subject imports did not prevent Zeon from improving its financial performance in 2021 to levels well above those in 2019.[177] Zeon's performance during the POI correlated not with subject imports but with trends in apparent U.S. consumption, weakening when the COVID-19 pandemic caused apparent U.S. consumption to decline from 2019 to 2020 and then strengthening when apparent U.S. consumption increased from 2020 to 2021, as lockdowns ended.[178]

For the reasons discussed above, we find that subject imports did not have a significant impact on the domestic industry.[179] Accordingly, we find that an industry in the United States is not materially injured by reason of subject imports of NBR from France, Mexico, and South Korea.

VI. No Threat of Material Injury by Reason of Subject Imports

A. Legal Standard

Section 771(7)(F) of the Tariff Act directs the Commission to determine whether the U.S. industry is threatened with material injury by reason of the subject imports by analyzing whether "further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted."[180] The Commission may not make such a determination "on the basis of mere conjecture or supposition," and considers the threat factors "as a whole" in making its determination whether dumped or subsidized imports are imminent and whether material

[176] CR/PR at Tables IV-2, IV-13, III-4, III-7, III-9, and VI-1.

[177] CR/PR at Table VI-1.

[178] CR/PR at Tables IV-2, IV-13, III-4, III-7, III-9, and VI-1. *See also* Petitioner's Prehearing Br. at 19, Arlanxeo's Prehearing Br. at 11, and Kumho's Prehearing Br. at 3 for parties' general agreement on the impact of COVID-19 on apparent U.S. consumption over the POI.

[179] The limits on the substitutability between subject imports and domestically produced NBR further corroborate that these imports did not have a significant impact on the domestic industry during the POI. *See* Section V.B.3. (discussing the Commission's finding of a moderate degree of substitutability between subject imports and the domestic like product).

[180] 19 U.S.C. § 1677(7)(F)(ii).

injury by reason of subject imports would occur unless an order is issued.[181] In making our determination, we consider all statutory threat factors that are relevant to these investigations.[182]

B. Cumulation for Threat

Under section 771(7)(H) of the Tariff Act, the Commission may "to the extent practicable" cumulatively assess the volume and price effects of subject imports from all countries as to which petitions were filed on the same day if the requirements for cumulation in the material injury context are satisfied.[183] No party addresses cumulation for purposes of the Commission's threat analysis.

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[181] 19 U.S.C. § 1677(7)(F)(ii).

[182] These factors are as follows:

(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement) and whether imports of the subject merchandise are likely to increase,

(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,

(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,

(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices and are likely to increase demand for further imports,

(V) inventories of the subject merchandise,

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).

19 U.S.C. § 1677(7)(F)(i). To organize our analysis, we discuss the applicable statutory threat factors using the same volume/price/impact framework that applies to our material injury analysis. Statutory threat factors (I), (II), (III), (V), and (VI) are discussed in the analysis of subject import volume. Statutory threat factor (IV) is discussed in the analysis of subject import price effects. Statutory factors (VIII) and (IX) are discussed in the analysis of impact. Statutory factor (VII) concerning agricultural products is inapplicable to this investigation.

[183] 19 U.S.C. § 1677(7)(H).

In section IV.B. above, we found a reasonable overlap of competition between and among subject imports from France, Mexico, and South Korea and the domestic like product. There is no information or argument on the record indicating that the reasonable overlap we have found will change in the imminent future.

We also find no differences in the likely conditions of competition pertaining to subject imports from France, Mexico, and South Korea in the imminent future that would warrant the consideration of subject imports from any country or countries separately for purposes of our threat analysis. Although subject imports from Mexico declined over the POI while subject imports from France and South Korea increased, the volume of subject imports from all three sources remained significant throughout the POI.[184] Moreover, the pricing data indicate that subject imports from France, Mexico, and South Korea generally did not have divergent trends or underselling patterns over the POI.[185]

Based on the likely reasonable overlap of competition between subject imports and the domestic like product, and the absence of any likely differences in the conditions of competition between imports from different subject countries in the imminent future, we exercise our discretion to cumulate subject imports from France, Mexico, and South Korea for purposes of our threat analysis.

[184] CR/PR at Table IV-2.

[185] CR/PR at Tables V-4-8 and V-10-11.

C. Analysis

1. Likely Volume

In section V.C. above, we found the volume of cumulated subject imports to be significant during the POI, both absolutely and relative to consumption and production in the United States. However, both U.S. shipments of subject imports and their market share declined during the POI, and subject import volume increased by only 1.7 percent.[186] There is no information on the record indicating that these trends are likely to change in the imminent future, or that a significant increase in subject import volume is likely absent relief.

The record indicates that subject producers are unlikely to substantially increase their exports to the United States in the imminent future. The capacity of the subject industries declined over the POI, and is not projected to increase in 2022 or 2023.[187] [188] Moreover, the capacity utilization rate of the subject industries increased from *** percent in 2019 to a period high of *** percent in 2021, and is projected to increase irregularly to *** percent in 2023.[189] Although subject producers possessed excess capacity of *** pounds in 2021, equivalent to *** percent of apparent U.S. consumption that year, the even larger volume of excess capacity possessed by subject producers in 2019 and 2020 coincided with a 25.1 percent decline in their exports to the United States during the period, in line with the decline in apparent U.S. consumption during the period.[190] There is no evidence on the record that subject producers will behave any differently in the imminent future, or use their excess capacity to significantly increase their exports to the U.S. market.

The end-of-period inventories of the subject industries decreased over the POI, and are projected to increase only slightly in 2022 and 2023 relative to 2021, to levels still well below

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[186] CR/PR at Tables IV-2 and IV-13.

[187] CR/PR at Table VII-17. Combined capacity is projected to remain at *** pounds In both 2022 and 2023, the same level as in 2021. *Id*.

[188] While Zeon argues that the capacity of the subject industries in France and Mexico will imminently increase, Petitioner's Prehearing Br. at 41-42, responding producers in those countries project no such increase. CR/PR at Tables VII-3 and VII-10. Zeon also argues that the Commission should draw an adverse inference against Korean producer *** due to its failure to submit a foreign producer's questionnaire and assume that the capacity of the South Korean industry is likely to increase. Petitioner's Prehearing Br. at 41. We decline to draw such an inference in the absence of any information on the record indicating that the capacity of the South Korean industry is likely to increase. *See* 19 U.S.C. § 1677e(b) (requiring that adverse inferences be based on data included in the record).

[189] CR/PR at Table VII-17. Capacity utilization is project to stay roughly the same in 2022 as in 2021, at *** percent, and to increase in 2023 to *** percent. *Id*.

[190] CR/PR at Tables IV-2, IV-13, and VII-17.

those in 2019.[191] While U.S. importers' inventories of cumulated subject imports increased over the POI by 90.2 percent,[192] the record indicates that this increase occurred as subject importers chose to maintain additional inventories in the United States due to supply chain issues associated with the COVID-19 pandemic.[193] Thus, subject importers are likely to use these inventories to maintain their presence in the U.S. market, not increase it, and the inventories are likely to decline as supply chain issues are resolved. Indeed, importers reported arranging a relatively small volume of cumulated subject imports in 2022, *** pounds, and reported no arranged imports of subject merchandise at all in either the third or fourth quarter of that year.[194]

Moreover, only *** responding subject producers reported an ability to shift production from out-of-scope products to in-scope NBR.[195] While producers in *** subject industries reported producing out-of-scope products on the same equipment they use to make in-scope NBR, their out-of-scope production on this equipment accounted for a small share of total production on the equipment.[196] As the production of in-scope NBR already accounts for the large majority of the production by these subject industries, subject producers have a limited ability to increase their production of NBR through product shifting.

Subject producers also lack the incentive to significantly increase their exports to the U.S. market in the imminent future. The combined industries' exports to the United States are

[191] CR/PR at Table VII-17. The combined industries' end-of-period inventories are projected to be *** pounds in 2022 and *** pounds in 2023, levels below the *** pounds of end-of-period inventories the combined industries reported in 2019. *Id*.

[192] CR/PR at Tables VII-18 and C-1. U.S. importers' inventories of cumulated subject imports decreased from 9.5 million pounds in 2019 to 8.6 million pounds in 2020 and increased to 18.2 million pounds in 2021. *Id*.

[193] CR/PR at VII-25, n.27.

[194] CR/PR at Table VII-19. These arranged imports for 2022 are equivalent to *** percent of shipments of cumulated subject imports in 2021. CR/PR at Tables VII-19 and C-1. We also note that the total volume of U.S. importers' arranged imports of subject NBR in 2022, *** pounds, is smaller than the total volume of U.S. importers' arranged imports of nonsubject NBR that year, *** pounds. CR/PR at Table VII-19.

[195] CR/PR at Table II-3.

[196] In the NBR industry in France, out-of-scope production accounted for *** percent of total production on the same equipment used to produce in-scope NBR in 2019, *** percent in 2020, and *** percent in 2021. CR/PR at Table VII-6. In the NBR industry in Mexico, out-of-scope production accounted for *** percent of total production on the same equipment used to produce in-scope NBR in 2019, *** percent in 2020, and *** percent in 2021. CR/PR at Table VII-12.

projected to significantly decrease in 2022 and 2023 relative to 2021,[197] whereas their shipments to other export markets, as well as within their home markets, are projected to increase.[198] These projections are consistent with the relatively higher prices available in certain of the subject producers' home and third country markets relative to the U.S. market.[199]

Finally, while we recognize that the United States was an important export market for each of the subject industries during the POI,[200] and that there are antidumping measures on NBR from France and South Korea in place in third countries,[201] we note that these factors did not result in a significant increase in subject import volume during the POI, but rather coincided with declining subject import U.S. shipments and market share.

For all the foregoing reasons, we find that cumulated subject import volume is not likely to increase significantly in the imminent future.

2. Likely Price Effects

In section V.D. above, we found that, although the pricing data show that subject imports predominantly undersold the domestic like product, Zeon did not lose a significant volume of sales or any market share to subject imports on the basis of price. We also found

[197] The combined industries' exports to the United States are projected to decrease from *** pounds in 2021 to *** pounds in 2022, increasing somewhat to *** in 2023. CR/PR at Table VII-17. The combined industries' exports to the United States as a share of their total shipments are projected to decrease from *** percent in 2021 to *** percent in 2022 and to *** percent in 2023. *Id*.

[198] The combined industries' exports to non-U.S. markets are projected to increase from *** pounds in 2021 to *** pounds in 2022 and to *** pounds in 2023. CR/PR at Table VII-17. The combined industries' home market shipments are projected to increase from *** pounds in 2021 to *** pounds in 2022 and to *** in 2023. *Id*. The combined industries' exports to third country markets as a share of their total shipments are projected to increase from *** percent in 2021 to *** percent in 2022 and to *** percent in 2023. *Id*. The combined industries' shipments within their home markets as a share of their total shipments are projected to increase from *** in 2021 to *** percent in 2022, returning to *** percent in 2023. *Id*.

[199] For products within HS subheading 4002.59 (which primarily includes NBR) from France, eight export markets (Germany, China, Turkey, Japan, Taiwan, Italy, Spain, and Sweden) had higher AUVs than the United States in 2021. CR/PR at Table VII-7. For products within HS subheading 4002.59 from Mexico, four export markets (Spain, Brazil, Colombia, and Canada) had higher AUVs than the United States in 2021. CR/PR at Table VII-13. For products within HS subheading 4002.59 from South Korea, seven export markets (India, Vietnam, Italy, Turkey, Indonesia, Thailand, and Germany) had higher AUVs than the United States in 2021. CR/PR at Table VII-16.

[200] CR/PR at Tables VII-7, VII-13, and VII-16.

[201] NBR from South Korea became subject to antidumping duties in Brazil and China in 2018. NBR from South Korea has been subject to antidumping duties in India since the late 1990s. NBR from France became subject to antidumping duties in Brazil in 2018. CR/PR at VII-28.

that cumulated subject imports neither depressed nor suppressed prices for the domestic like product during the POI.

The record does not indicate that subject import underselling is likely to intensify. Nor is there any evidence of a likely imminent change in conditions of competition that would result in cumulated subject imports having price depressive or suppressive effects on domestic industry prices. We consequently find that cumulated subject imports are not likely to enter at prices that would be likely to have significant depressing or suppressing effects on domestic prices, or that would be likely to increase demand for further subject imports in the imminent future.

3. Likely Impact

In section V.E. above, we found that Zeon's performance over the POI correlated with changes in apparent U.S. consumption rather than with subject imports, and that subject imports had not prevented Zeon from capitalizing on the significant increase in apparent U.S. consumption between 2020 and 2021, and improving its financial performance to the highest levels of the period. We have also found that cumulated subject import volumes are not likely to increase significantly in the imminent future and that subject imports are not likely to have significant price effects. Given this, and projected growth in NBR demand that Zeon is well-positioned to benefit from, we find that cumulated subject imports will not likely have a significant impact on the domestic industry in the imminent future.

VII. Conclusion

For the reasons stated above, we determine that an industry in the United States is not materially injured or threatened with material injury by reason of imports of NBR from France, Mexico, and South Korea found by Commerce to be sold in the United States at less than fair value.

Part I: Introduction

Background

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Zeon Chemicals L.P. and Zeon GP, LLC (collectively "Zeon"), Louisville, Kentucky, on June 30, 2021, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of acrylonitrile-butadiene rubber ("NBR")[1] from France, Mexico, and South Korea. Table I-1 presents information relating to the background of these investigations.[2] [3]

Table I-1
NBR: Information relating to the background and schedule of this proceeding

Effective date	Action
June 30, 2021	Petitions filed with Commerce and the Commission; institution of the Commission's investigations (86 FR 35825, July 7, 2021)
July 20, 2021	Commerce's notice of initiation (86 FR 40192, July 27, 2021)
August 16, 2021	Commission's preliminary determinations (86 FR 46885, August 20, 2021)
February 2, 2022	Commerce's preliminary determinations (France: 87 FR 5787, Mexico: 87 FR 5790, and South Korea: 87 FR 5796, February 2, 2022); scheduling of final phase of Commission investigations (87 FR 11481, March 1, 2022)
June 1, 2022	Commission's hearing
June 24, 2022	Commerce's final determinations (France: 87 FR 37833, Mexico: 87 FR 37829, and South Korea: 87 FR 37825, June 24, 2022)
July 11, 2022	Commission's vote
August 1, 2022	Commission's views

[1] See the section entitled "The subject merchandise" in Part I of this report for a complete description of the merchandise subject in this proceeding.

[2] Pertinent Federal Register notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] Appendix B presents the witnesses that appeared at the Commission's hearing.

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.*

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, dumping margins, and domestic like product. Part II of this report presents information on conditions of competition and other relevant economic factors. Part III presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts IV and V present the volume of subject imports and pricing of domestic and imported products, respectively. Part VI presents information on the financial experience of U.S. producers. Part VII presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

Market summary

NBR is a component in products used in the oil and gas, construction, industrial equipment, and automotive industries that is known for its oil resistance. The only known U.S. producer of NBR is Zeon. Leading producers of NBR outside the United States include *** of France, *** of Mexico, and *** of South Korea. The leading U.S. importer of NBR from France is ***, the leading U.S. importer of NBR from Mexico is ***, and the leading U.S. importers of NBR from South Korea are ***. The leading importers of NBR from nonsubject countries (primarily ***) are ***. U.S. purchasers of NBR include firms that are distributors, mixers, and end users in a variety of industries, including the automotive and oil and gas industries; leading purchasers include ***

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

***.

Apparent U.S. consumption of NBR totaled approximately 101.7 million pounds ($165.1 million) in 2021. The U.S. producer's U.S. shipments of NBR totaled *** pounds ($***) in 2021 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. importers' U.S. shipments of imports from subject sources totaled 61.6 million pounds ($89.8 million) in 2021 and accounted for 60.6 percent of apparent U.S. consumption by quantity and 54.4 percent by value. U.S. importers' U.S. shipments of imports from nonsubject sources totaled *** pounds ($***) in 2021 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C, table C-1. U.S. industry data are based on the questionnaire responses of one firm that accounted for 100 percent of U.S. production of NBR during 2021. U.S. imports are based on official U.S. import statistics and the questionnaire responses of 18 companies, representing an estimated *** percent of U.S. imports from France, *** U.S. imports from Mexico, *** percent of U.S. imports from South Korea, *** percent of U.S. imports from the largest nonsubject source Japan and *** percent of U.S. imports from all other nonsubject sources.

Previous and related investigations

NBR has been the subject of two prior antidumping duty investigations in the United States; one on imports from Japan, for which the order was revoked in October 1999, and the other on imports from South Korea, which was terminated in July 1999.

In June 1988, the Commission determined that the NBR industry in the United States was being materially injured by reason of imports of NBR from Japan.[6] On June 16, 1988, Commerce issued an antidumping duty order on NBR from Japan.[7] In April 1999, the Commission instituted a five-year review to determine whether revocation of the antidumping duty order on NBR from Japan would be likely to lead to continuation or recurrence of material injury and determined in July 1999 that it would conduct an expedited review.[8] In September 1999, the Commission determined that revocation of the antidumping duty order on NBR from Japan would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[9] In October 1999, Commerce revoked the antidumping duty order on NBR from Japan.[10]

In May 1999, the Commission instituted an antidumping duty investigation to determine whether an industry in the United States was materially injured or threatened with material injury by reason of LTFV imports of NBR from South Korea.[11] In July 1999, the Commission determined that there was no reasonable indication that an industry in the United States was materially injured or threatened with material injury, or that the establishment of an industry in the United States was materially retarded, by reason of imports of NBR from South Korea.[12]

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[6] Nitrile Rubber from Japan, Inv. No. 731-TA-384 (Final), USITC Publication 2090, June 1988, p. 1.

[7] 53 FR 22553, June 16, 1988.

[8] 64 FR 15788, April 1, 1999 and 64 FR 38475, July 16, 1999.

[9] 64 FR 51557, September 23, 1999.

[10] 64 FR 53999, October 5, 1999.

[11] Nitrile Rubber from Korea, Inv. No. 731-TA-827 (Preliminary), USITC Publication 3210, July 1999, p. 1.

[12] Nitrile Rubber from Korea, Inv. No. 731-TA-827 (Preliminary), USITC Publication 3210, July 1999, p. 1, and 64 FR 38691, July 19, 1999.

Nature and extent of sales at LTFV

Commerce published notices in the Federal Register of its preliminary determinations on February 2, 2022,[13] and its final determinations on June 24, 2022,[14] of sales at LTFV with respect to imports from France, Mexico, and South Korea. Tables I-2, I-3, and I-4 present Commerce's dumping margins with respect to imports of NBR from France, Mexico, and South Korea.

Table I-2
NBR: Commerce's weighted-average LTFV margins with respect to imports from France

Exporter	Producer	Preliminary dumping margin (percent)	Final dumping margin (percent)
Arlanxeo Emulsion Rubber France S.A.S.	Arlanxeo Emulsion Rubber France S.A.S.	164.13	81.86
All others		164.13	81.86

Source: 87 FR 5787, February 2, 2022, and 87 FR 37833, June 24, 2022.

Table I-3
NBR: Commerce's weighted-average LTFV margins with respect to imports from Mexico

Exporter	Producer	Preliminary dumping margin (percent)	Final dumping margin (percent)
Industrias Negromex S.A. de C.V.	Industrias Negromex S.A. de C.V.	18.43	18.45
All others		18.43	18.45

Source: 87 FR 5790, February 2, 2022, and 87 FR 37829, June 24, 2022.

Table I-4
NBR: Commerce's weighted-average LTFV margins with respect to imports from South Korea

Exporter	Producer	Preliminary dumping margin (percent)	Final dumping margin (percent)
Kumho Petrochemical Co., Ltd.	Kumho Petrochemical Co., Ltd.	19.20	18.80
LG Chemical, Ltd.	LG Chemical, Ltd.	35.21	35.21
All others		19.20	18.8

Source: 87 FR 5796, February 2, 2022, and 87 FR 37825, June 24, 2022.

[13] 87 FR 5787, 87 FR 5790, and 87 FR 5796, February 2, 2022.
[14] 87 FR 37833, 87 FR 37829, and 87 FR 37825, June 24, 2022.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[15]

> *The product covered by these investigations is commonly referred to as acrylonitrile butadiene rubber or nitrile rubber (AB Rubber). AB Rubber is a synthetic rubber produced by the emulsion polymerization of butadiene and acrylonitrile with or without the incorporation of a third component selected from methacrylic acid or isoprene. AB Rubber products that include a third component that is not methacrylic acid or isoprene are not covered by the scope. This scope covers AB Rubber in solid or non-aqueous liquid form. The scope also includes carboxylated AB Rubber.*
>
> *Excluded from the scope of these investigations is AB Rubber in latex form (commonly classified under Harmonized Tariff Schedule of the United States (HTSUS) subheading 4002.51.0000). Latex AB Rubber is commonly either (a) acrylonitrile/butadiene polymer in latex form or (b) acrylonitrile/butadiene/methacrylic acid polymer in latex form. The broader definition of latex refers to a water emulsion of a synthetic rubber obtained by polymerization.*
>
> *Also excluded from the scope of these investigations is: (a) AB Rubber containing additives incorporated during the compounding, mixing, molding, or use of AB Rubber comprising greater than twenty percent of the total weight of the product. Additives would include, but are not limited to, fillers (e.g. carbon black, silica, clay); reinforcement agents (e.g. fibers, carbon black, silica); vulcanization agents (e.g. sulfur, sulfur complexes, peroxide); or AB Rubber containing extension oils making up greater than forty percent of the total weight of the product. Such products would be generally classified under HTSUS subheading 4005; (b) AB Rubber containing polyvinyl chloride (PVC) making up greater than twenty percent of total weight of the product; (c) hydrogenated AB Rubber (commonly referred to as HNBR) produced by subsequent dissolution and hydrogenation of AB Rubber; (d) reactive liquid polymers containing acrylonitrile and butadiene with amine, epoxy, carboxyl or methacrylate vinyl chemical functionality.*
>
> *Subject merchandise includes material matching the above description that has been finished, packaged, or otherwise processed in a third country, including by modifying physical form or packaging with another*

[15] 87 FR 37833, 87 FR 37829, and 87 FR 37825, June 24, 2022.

product, or performing any other finishing, packaging, or processing that would not otherwise remove the merchandise from the scope of the investigation if performed in the country of manufacture of the AB Rubber.

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations is provided for in subheading 4002.59.00 of the Harmonized Tariff Schedule of the United States ("HTS"). NBR produced in France, Mexico, and South Korea is imported into the U.S. market at the general rate of duty of free.[16] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

[16] In addition to the general rate, U.S. imports of NBR produced in China classified under 4002.59.00 were included in the modified Section 301 action against China in the Office of the United States Trade Representative's ("USTR's") second enumeration ("Trance 3, List 3") as of September 21, 2018. Items on this list became subject to additional duties of 10 percent ad valorem effective September 24, 2018, and the duty rate increased to 25 percent ad valorem. See U.S. note 20(f) to subchapter III of HTS chapter 99. HTSUS (2022), Revision 4, USITC Publication 5318, April 2022, Ch 99, 20(f), pp. 99-III-26, 36. USTR's 301 actions are only applicable to products of China. For the time period only from after May 10, 2019 and before June 15, 2019, goods subject to heading 9903.88.09 (those classified in subheadings listed in U.S. note 20(f) and (g)) had an additional 10 percent ad valorem duty added, as stated in U.S. note 20(l), subchapter III, chapter 99.

The product

Description and applications

NBR is a type of synthetic rubber that is a bipolymer of acrylonitrile and butadiene or a terpolymer with an additional third component selected from methacrylic acid or isoprene.[17] The product can be in a solid or non-aqueous liquid form. The terpolymer with the third component selected from methacrylic acid can be carboxylated in its form and is termed carboxylated NBR ("XNBR").[18] A downstream product of NBR is hydrogenated NBR ("HNBR").[19] HNBR has an additional chemical step to be produced, and the final product has higher heat and chemical resistance, elasticity, ozone resistance, and mechanical strength compared to NBR.[20] In the United States, HNBR is not produced on the same equipment as NBR.[21]

NBR, in general, can function in minus 40-degree to 226-degree Fahrenheit temperatures. NBR is more puncture-resistant than natural rubber and is resistant to cuts, abrasion, tears, caustics, and aliphatic hydrocarbons. However, NBR is less flexible than natural rubber.[22] NBR products vary in their acrylonitrile content, Mooney viscosity, and physical form.[23] In general, acrylonitrile content can vary from 19-51 percent, and Mooney viscosity can vary from 25-95 Mooney units, depending on the product. In general, as acrylonitrile content increases, oil and fuel resistance increase, tensile strength and hardness increase, and heat and abrasion resistance improve.[24] As acrylonitrile content decreases, low temperature performance, dynamic performance, compression set, and resilience all improve.[25] With

[17] A bipolymer is synthesized from two monomers. A terpolymer is a polymer synthesized from three different monomers. A general term used is a copolymer, which is synthesized from two or more monomers (thus bipolymers and terpolymers are both types of copolymers). A monomer is a molecule that can react together with other monomer molecules to form a larger chain of monomers called a polymer.

[18] "Carboxylated" is defined as of a compound containing an added carboxyl group (carbon double bonded to oxygen with an oxygen single bonded to hydrogen on the same carbon). Definitions from Oxford Languages, accessed July 27, 2021. XNBR has a CAS number of 9010-81-5.

[19] HNBR has a CAS number of 88254-10-8.

[20] Petitions, p. 10. HNBR is out of scope of these investigations.

[21] Conference transcript, pp. 20-21 (Saunders).

[22] Petitions, p. 7.

[23] The Mooney viscosity measures the stiffness of compounds. The unit of measure is arbitrary and known as a Mooney unit. The higher the number, the higher the viscosity. Sisanth, K.S., M.G. Thomas, J. Abraham, S. Thomas, "General Introduction to Rubber Compounding," *Progress in Rubber Nanocomposites*, 2017, pp. 1-39, https://doi.org/10.1016/B978-0-08-100409-8.00001-2.

[24] Petitions, p. 5.

[25] Polymer Properties Database, "NBR- Butadiene Nitrile Rubber," accessed July 29, 2021.

respect to Mooney viscosity, higher Mooney viscosity results in improved physical properties of strength, but processability is decreased. Lower Mooney viscosity materials are easier to process.[26] The most common NBR materials sold are in the range of acrylonitrile content (26-41 percent) and Mooney viscosity (30-80 Mooney units) as these materials give the best balance of properties and processability.[27] One company states that molecular weight and polydispersity are also factors that distinguish products.[28] The qualification or certification of products, depending on their application, can take anywhere from a few months to years.[29]

NBR is most used in applications where a moderate level of heat and oil or fuel resistance are required such as applications in industrial hose, automotive, and the oil and gas industries.[30] The automotive industry is the primary market segment, and it accounts for about 25 percent of consumption of NBR.[31] Applications include, but are not limited to the following: 1) hoses (fuel, hydraulic fluid, oils and lubricant, chemical transport); 2) air ducts (for movement of air between air filter and internal combustion engine); 3) oil and gas components (stators, motor pump seals, blow-out preventors, hoses, and various seal components); 4) construction insulation (foamed insulation for pipe protection and insulation); 5) adhesives (road marking tape, construction adhesives, phenolic adhesives, epoxy adhesives – used for construction, aerospace, and general goods); 6) mats (rubber backing on 'walk-off' mats used in office lobbies, factories, etc.); 7) wires and cables (flexibilizer, modifier for wire covers); 8) rollers (printing blankets, graphic arts printing rolls, rice hull remover rollers); 9) seals O-rings (various automotive and industrial use); 10) PVC modifications (flexibilizer; various construction and residential applications ranging from garden hose to PVC window blinds to appliances); 11)

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[26] The International Institute of Synthetic Rubber Producers, "Acrylonitrile-butadiene Rubber (NBR)," p. 3, accessed July 28, 2021.

[27] Petitions, pp. 5-6.

[28] Hearing transcript, pp. 176, 220, 230 (Gustafsson); Molecular weight is defined as the mass of one mole of a substance. ChemCollective, "Stoichiometry Tutorials," accessed June 10, 2022, https://chemcollective.org/activities/tutorials/stoich/calculating_molecular_weight; Polydispersity is defined as the weight average divided by the number average molecular weight (Mw/Mn), and is used to give the researcher an idea of the breadth or width of the molecular weight distribution. Malvern Instruments, "What Does Polydispersity Mean?" accessed June 10, 2022. https://www.materials-talks.com/wp-content/uploads/2017/10/What-does-polydispersity-mean.pdf. ITT states that these properties are important for certain products, such as in the automotive industry. ITT's posthearing brief, pp. 4-7.

[29] Zeon reports that a commodity grade product can take a few months and as short as 6 months for a specialty grade product and gives an example that one highly technical product took 6-8 months. Petitioner's posthearing brief, p. 8, Annex IV, p. 29; Respondents state certification could take years for certain purchasers. Hearing transcript, p. 12 (Mills).

[30] Conference transcript, p. 19 (Saunders), p. 44 (Cail).

[31] Conference transcript, p. 44, 63 (Cail); p. 116, 134-135 (Quintero); p. 143 (Kendler).

belting (V-belts for mechanical power transmission; mining belts for conveying materials); and 12) food handling (hoses; milking inflators; sanitary applications).[32] XNBR materials are typically used in the same applications as NBR but where improved abrasion resistance and improved tensile strength may be desired in the finished article.[33]

NBR is sold in bale (slab), powder, pellet, particulate (crumb), and liquid forms.[34] The majority of shipments are in the form of compressed bales.[35] The bale end users are typically those making rubber parts.[36] The petitioner produces approximately 65 products,[37] Negromex

[32] Petitions, p. 8.

[33] XNBR materials meet the same ASTM D2000 classifications of BF, BG, BK, and CH as NBR and are produced and compounded the same way as NBR materials. Petitioner notes the customers for NBR and XNBR are the same. Petitioner's postconference brief, p. 6; Conference transcript, p. 19 (Saunders).

[34] Petitions, p. 6; Petitioner's postconference brief, pp. 8-9. Particulate is also known as crumb, which is NBR in irregular shape, typically of size where any single X, Y, Z dimension is less than 6 inches. X, Y, and Z dimensions would be non-uniform within any specific crumb sample. Pellet is NBR in regular shape typically in size where the X, Y, Z dimensions are, in aggregate, generally uniform from pellet to pellet (with exact dimensions subject to the manufacturer's preference). Pellets are typically of round or cylindrical shape. Pellets are utilized by NBR customers who require a uniform product shape due to the sophisticated handling and material conveying systems utilized in the customer's production process. Powder is NBR in fine particle form, where the particle size is commonly well below 0.2 inches in diameter. Powder NBR is preferred by customers using NBR for plastic modification, friction products, and other applications where NBR is used as a modifier. Liquid grade NBR is a low molecular weight NBR that, upon heating, is pourable and pumpable. Applications of liquid NBR include use as a non-extractable plasticizer and as an additive for processing improvement in rubber compounds. Id.

[35] Conference transcript, p. 69 (Cail).

[36] Conference transcript, p. 70 (Recchio).

[37] Zeon states that it competes in all the different "product buckets," from low acrylonitrile to high, including the carboxylic and liquid. Hearing transcript, p 132 (Cail); Petitioner's posthearing brief, p. 17; Zeon produces and sells about 65 grades of NBR in commercial quantities and estimates it has produced equivalent substitute grades for *** percent of NBR grades supplied to the U.S. market since 2018. Petitioner's posthearing brief, p. 18.

of Mexico produces *** products of various grades, of which *** are for the U.S. market,[38] and Kumho of Korea produces *** products of which *** were sold to the U.S. [39] [40]

Manufacturing processes

The general chemical reaction for production of NBR involves the reaction of 1,3 butadiene (butadiene) and acrylonitrile, as shown in figure I-1.[41] The reaction for production of XNBR has an additional component of the reactant raw material methacrylic acid. As NBR products vary in acrylonitrile content, there are different reaction stoichiometries based on the desired percentage of acrylonitrile in the final product.[42] If there is a reaction input of about 40 percent acrylonitrile and 60 percent butadiene, the reaction will occur at about the same rate (a product will result with about half one monomer and half the other resulting in a final product of 50 percent acrylonitrile content).[43] However, if one wants to change the ratio so the final product has 51 percent acrylonitrile, the reaction has to be starved of butadiene, and more acrylonitrile has to be added.[44] Due to the fact that in products with higher acrylonitrile content the reaction will not run to 100 percent, there will be left over acrylonitrile at the end of the reaction that can be recovered and used again.[45] This is known as the monomer recovery

[38] Respondent Negromex's postconference brief, Exhibit 1, question 14.

[39] Petitioner and respondents use the terms "specialty" and "commodity" to describe different types of NBR, but there are no industry-wide accepted standards for what constitutes "specialty NBR" versus "commodity NBR." Petitioner defines "commodity NBR" as NBR with acrylonitrile content between 26 and 41 percent, and "specialty NBR" as NBR with acrylonitrile content less than 26 percent or more than 41 percent. Petitioner's comments on draft questionnaires, exh. 1. Respondents define "specialty NBR" as being characterized by more resilient physical properties, such as resistance to oil and fuel, tensile strength, flexibility, or extreme temperatures. Respondents state that "specialty NBR" typically has an acrylonitrile content of below 31 or above 35 percent and may or may not have a third additive. Respondents define "commodity NBR" as characterized by comparatively less rigorous physical properties than "specialty NBR," with a narrower range of acrylonitrile content of typically between 31. and 35 percent and has no third additive. Respondents' Arlanxeo France, Arlanxeo USA, Dynasol, Kumho, and Negromex comments on draft questionnaires, p. 2; see also Hearing transcript, p. 113 (Cail).

[40] Petitioner's posthearing brief, pp. 20, 23; Petitioner's posthearing brief, Exhibits III-10, III-11.

[41] 1,3 butadiene and acrylonitrile are two different monomers that react to form a polymer product. Petitioner purchases both monomers and does not produce them. Respondents Negromex and Kumho purchase both monomers and do not produce them. Conference transcript, p. 175 (Quintero); p. 176 (Kendler).

[42] "Stoichiometry" is the relationship between the relative quantities of substances taking part in a reaction or forming a compound, typically a ratio of whole integers. Definition from Oxford languages, accessed August 4, 2021.

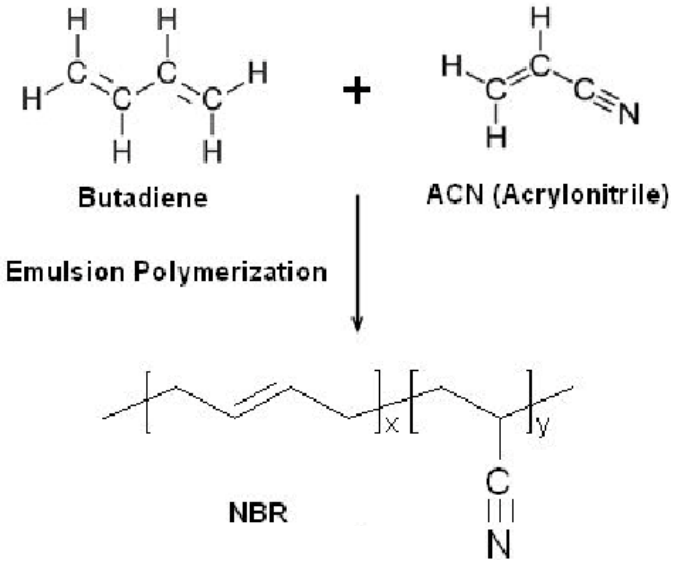
[43] Conference transcript, p. 92 (Recchio).

[44] Conference transcript, p. 93 (Recchio).

[45] Conference transcript, p. 93 (Recchio); pp. 174-175 (Plaza).

process.[46] Since there are different amounts of acrylonitrile and butadiene raw materials added depending on the desired acrylonitrile percentage in the final product, the cost of the different reactions will vary.[47] [48]

Figure I-1. Chemical reaction for production of NBR



Source: Liu, Minghui, "Hydrogenation of Nitrile and Olefinic Groups in Butadiene Rubbers," 2014.

The raw materials in varying amounts are added into a reactor along with water, emulsifier (soap), radical generating activator, and other chemicals (e.g., pigment) in order to begin the emulsion polymerization process, as depicted in figure I-2.[49] The reaction is exothermic, so heat is removed using a cooling system to maintain a constant temperature until

[46] Petitioner notes that Zeon does not sell recovered monomers commercially. They are consumed internally only. Conference transcript, p. 89 (Saunders).

[47] Petitioner notes that acrylonitrile is typically more expensive than butadiene, and therefore products with higher acrylonitrile content are more costly to produce. XNBR is a product that has a third monomer of methacrylic acid as a reactant, and it is therefore more expensive to produce than a reaction with only acrylonitrile and butadiene. Conference transcript, pp. 34-25 (Saunders). Petitioner states that XNBR is 1.4 to 2 times more expensive than NBR, all other factors being the same. Conference transcript, p. 26 (Arkan).

[48] The petitioner asserts that U.S. purchasers commonly blend multiple grades of NBR to reach an intermediate acrylonitrile content point. Petitioner's posthearing brief, pp. 20, 23.

[49] Petitions, p. 9. The petitioner uses a batch process in the United States, while the respondents use both batch and continuous processes. Continuous and batch processing are described further in this section.

the desired degree of polymerization is achieved.[50] Next, the reaction is stopped using a short-stop solution. Unreacted or residual monomers are recovered using recovery process before stabilizers are added to the NBR latex emulsion. This NBR latex emulsion with stabilizers is a finished product that is sold in the market and in this context is termed latex NBR. This material typically contains 60 percent water. This material is sold in this form for use in applications such as nitrile gloves and fabric treatment and is commonly processed using a dipping process.[51]

It is at this step that NBR latex and solid NBR become distinct and differentiated within the manufacturing process, with latex NBR foregoing further processing and solid NBR requiring additional steps to produce.[52] Solid NBR is produced by taking latex NBR and doing three further steps – (a) coagulation to cause the emulsion to be broken for the polymer to coagulate and form crumb; (b) washing to reduce the portion of polymerization soap impurities; and (c) drying to eliminate >95 percent of the water content in the finished product. After the material is dried, it is then compacted into a bale using a hydraulic press and the bale material is then packaged for sale or further processing.[53]

Solid NBR and latex NBR are produced on common equipment and involve an overlapping production process corresponding to the "wet end" of the production process for NBR, which includes emulsion polymerization and monomer recovery. However, unlike latex NBR, NBR then undergoes further processing and treatment involving coagulation, washing, and drying.[54] On a commercial and industrial scale, latex NBR is transformed into solid NBR via a controlled process whereby coagulation conditions are tightly controlled and whereby coagulation chemicals are precisely incorporated. Solid NBR has to have residual water dried off from the coagulated crumb. Industrial scale drying equipment (tunnel dryers, extruder dryers, etc.), typically costing in excess of $1 million, is required for economic drying of synthetic rubber, including NBR.[55]

[50] Conference transcript, p. 16 (Saunders).

[51] Conference transcript, p. 20 (Saunders). Latex NBR is out of scope while solid NBR is in scope of these investigations.

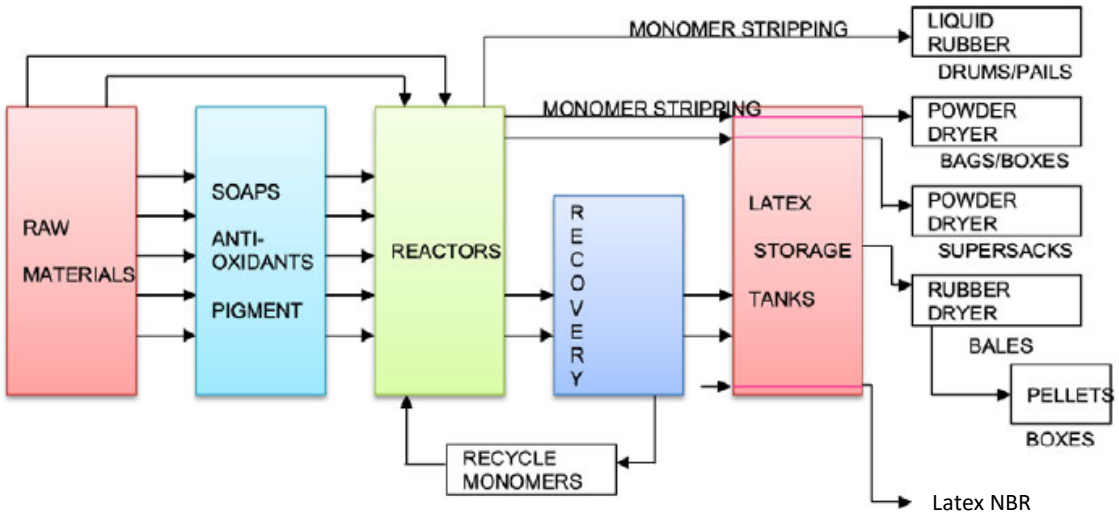
[52] Conference transcript, p. 16 (Saunders).

[53] Conference transcript, p. 17 (Saunders).

[54] Petitioner's postconference brief, p. 11.

[55] Petitioner's postconference brief, p. 12.

Figure I-2. Manufacturing process for NBR



Source: Petitions, p. 10.

At the end of the process of manufacturing NBR, both petitioners and respondents measure acrylonitrile content, Mooney viscosity, and ash content in their specification criteria.[56]

The manufacturing process can be completed in either continuous or batch mode. Continuous operations require a series of reactors where the material is placed in the front of a series of reactors and the material goes from one reactor to another. There may be eight to twelve reactors in series that the product is run through, and only one grade of product can be made at a time. Batch processing has separate reactors that are not linked in a series in which multiple grades can be run at the same time.[57] The petitioner operates in both batch and continuous processes globally, but in the United States, it only uses the batch process. The respondents use either batch or continuous processes or both, depending on the respondent.[58] Respondent Negromex uses both batch and continuous processes, and uses the batch process for its specialty and commodity products that are produced in small volumes.[59] Petitioner gives an estimation that the continuous process is around 5 percent less costly than the batch process ***.[60] Respondent Negromex notes the cost

[56] Petitioner also measures heat loss. Negromex measures humidity. Conference transcript, p. 95-96 (Recchio); p. 175 (Plaza).
[57] Conference transcript, pp. 39-40 (Recchio).
[58] Conference transcript, p. 177 (Plaza).
[59] Conference transcript, p. 180 (Sjoberg); p. 180 (Plaza).
[60] Hearing transcript, p. 10 (Arkan). Petitioner's posthearing brief, Annex III, p. 21.

differential is related to steam and power calculated per ton between batch operation records and continuous operation records.[61] Negromex, which has both continuous and batch processes, calculates that in 2020, *** percent of operations were in the continuous mode and *** percent were in the batch mode.[62] Respondent Kumho operates in *** percent continuous mode and *** percent batch mode.[63] Arlanxeo France indicates that *** percent of its commercially shipped NBR is produced in continuous mode, though more of its *** NBR is produced through ***.[64] Other than the batch and continuous parts of the system, there are no known differences in the manufacturing processes of petitioners and respondents.[65]

Domestic like product issues

No issues with respect to domestic like product have been raised in these investigations. The petitioner proposes that the Commission should define a single domestic like product coextensive with the scope of these investigations.[66] Respondents Kumho, Negromex, Dynasol, Arlanxeo France, and Arlanxeo USA (collectively, the "subject producers") do not seek to define a separate domestic like product.[67]

During the preliminary phase of the investigations, the Commission analyzed whether any of the following should be considered separate like products: in-scope XNBR, out-of-scope HNBR, and out-of-scope latex NBR. The Commission concluded that the record did not indicate a clear dividing line between in-scope XNBR and all other in-scope NBR, but it did indicate clear

[61] Respondent Negromex's postconference brief, Exhibit 1, question 1. Respondent Negromex gives a more detailed calculation of *** in Exhibit 1, question 12 and refers to and keeps the same calculation in its posthearing brief. Respondent Negromex's posthearing brief, p. 2. Respondent Kumho states ***. Respondent Kumho's postconference brief, Exhibit 1, p. 3. Respondent Arlanxeo states that batch processing is approximately *** percent more costly than continuous processing. Arlanxeo's posthearing brief, responses to questions, pp. 28-29.

[62] Respondent Negromex's postconference brief, Exhibit 1, question 15.

[63] Respondent Kumho's postconference brief, Exhibit 1, p. 3.

[64] Respondent Arlanxeo's postconference brief, p. 4.

[65] Conference transcript, p. 43 (Recchio).

[66] Petitioner's postconference brief, p.4, and petitioner's comments on draft questionnaires, exh. 1, p. 2.

[67] Subject producers' comments on draft questionnaires, p. 5, and hearing transcript, p. 244 (Kendler, Mills, and Sjoberg).

dividing lines between in-scope NBR and both out-of-scope HNBR and latex NBR. Thus, the Commission defined a single domestic like product coextensive with the scope.[68]

[68] Acrylonitrile-Butadiene Rubber (NBR) from France, Korea, and Mexico, Investigation Nos. 731-TA-1567-1569 (Preliminary), USITC Publication 5227, August 2021, pp. 12-13.

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

NBR is a product known for its oil resistance, toughness, and temperature resistance for a wide range of uses in hoses, air ducts, construction insulation, oil and gas components, mats, wires and cables, rollers, seals, belts, and belting.[1] The automotive sector is the largest sector for the domestic NBR market, accounting for approximately 25 percent of the market, with other large sectors including agriculture and construction.[2]

NBR is produced in several grades, which come in a variety of combinations of chemical composition and form.[3] Customers typically pick the grade of NBR based on acrylonitrile content, the Mooney viscosity of the material, and the product form.[4] NBR is produced in the form of bales and slabs; ground, particulate, and pellets; powder; and liquid.[5] The acrylonitrile content of NBR determines its fluid resistance, and the Mooney viscosity determines the flowability of NBR for processing.[6] All types of NBR can be produced through continuous or batch processing, the latter of which is more expensive but adds to production versatility.[7] The U.S. producer only uses batch processing while NBR producers in subject countries have both processing capabilities.[8]

There are two main categories of customers for NBR: custom mixers, which provide rubber compounding and mixing services for rubber part manufacturers, and rubber part manufacturers themselves (if they have in-house mixing operations).[9] Automotive, oil and gas,

[1] Petition, pp. 7-8; Petitioner's postconference brief, pp. 6-7. NBR also goes into military rocket motors, shoe soles, aerospace aircraft construction, and energy recovery parts. Conference transcript, p. 14 (Recchio); Petitioner's postconference brief, Exh. 1, p. 2.

[2] Conference transcript, pp. 63-64 (Cail); Respondent Kumho postconference brief, p. 3.

[3] Petitioner's postconference brief, p. 7.

[4] Conference transcript, p. 54 (Cail).

[5] Petition, pp. 8-9. Particulates and pellets are generally preferred for dissolving in a solution. Particulate NBR is generally used for composite-type products and adhesives, and pellets are generally used for wire and cable applications. Bale and slab NBR are generally used when compounding or mixing with other components and is preferred for ease of handling. Conference transcript, pp. 68-69, 166-167 (Cail, Quintero); Mexican respondent postconference brief, Exh. 1, no. 10.

[6] Generally, the greater the acrylonitrile content, the greater the oil and fuel resistance, tensile strength and hardness, and heat and abrasion resistance. Meanwhile, the greater the Mooney viscosity, the greater the strength, but the more difficult the processing. Conference transcript, pp. 18, 22 (Saunders, Cail); Petitioner's postconference brief, p. 5.

[7] Conference transcript, pp. 39-40, 42 (Recchio, Arkan); Respondent Negromex's postconference brief, Exh. 1, no. 12. The extent of the savings was contested by parties.

[8] Conference transcript, p. 47 (Recchio).

[9] Petition, p. 21.

and industrial machinery applications typically require costlier, specialty grades of NBR, while walk-off mats and commercial printing applications typically require less expensive grades of NBR.[10]

Apparent U.S. consumption of NBR decreased by 7.8 percent by quantity during January 2019-December 2021, and decreased 6.2 percent by value.

U.S. purchasers

The Commission received 38 usable questionnaire responses from firms that had purchased NBR during 2019-21.[11] [12] [13] The responding purchasers represented firms in a variety of domestic industries; 15 responding purchasers are custom mixers, 6 are automotive end users, 5 are machinery or industrial end users, 3 are oil and gas end users, 11 are other end users, 3 are distributors, and 8 reported as other types of firms. Firms reporting classifications of other types include ***. Large purchasers of NBR include ***.

[10] Respondent Kumho postconference brief, pp. 3-4.

[11] The following firms provided purchaser questionnaire responses: ***.

[12] Of the 38 responding purchasers, 20 purchased the domestic NBR in 2019-21, 27 purchased imports of the subject merchandise from France, 20 from Mexico, and 19 from South Korea. Seventeen purchased imports of NBR from nonsubject source Japan, while 16 purchased imports of NBR from other nonsubject sources. These sources include Brazil (5), China (1), India (2), Italy (3), Russia (7), and Taiwan (2).

[13] Thirty purchasers indicated they had marketing/pricing knowledge of domestic product, 28 of NBR imported from France, 22 of NBR imported from Mexico, 20 of NBR imported from South Korea, 20 of NBR imported from nonsubject country Japan, and 17 of NBR from other nonsubject countries.

Channels of distribution

The U.S. producer sold mainly to *** while importers of product from France, South Korea, and nonsubject source Japan ***. Importers of product from Mexico sold mainly to ***, as shown in table II-1. Only importers of NBR from South Korea sold any substantial portion to ***. More detailed information from Zeon and importers regarding total quantities, values, unit values, and shares based on channels of distribution is presented in appendix D.

Table II-1
NBR: Share of quantity of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2019	2020	2021
United States	Distributors	***	***	***
United States	Custom mixers	***	***	***
United States	Other end users	***	***	***
France	Distributors	***	***	***
France	Custom mixers	***	***	***
France	Other end users	***	***	***
Mexico	Distributors	***	***	***
Mexico	Custom mixers	***	***	***
Mexico	Other end users	***	***	***
South Korea	Distributors	***	***	***
South Korea	Custom mixers	***	***	***
South Korea	Other end users	***	***	***
Subject sources	Distributors	***	***	***
Subject sources	Custom mixers	***	***	***
Subject sources	Other end users	***	***	***
Japan	Distributors	***	***	***
Japan	Custom mixers	***	***	***
Japan	Other end users	***	***	***
Other nonsubject sources	Distributors	***	***	***
Other nonsubject sources	Custom mixers	***	***	***
Other nonsubject sources	Other end users	***	***	***
Nonsubject sources	Distributors	***	***	***
Nonsubject sources	Custom mixers	***	***	***
Nonsubject sources	Other end users	***	***	***
All import sources	Distributors	***	***	***
All import sources	Custom mixers	***	***	***
All import sources	Other end users	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Geographic distribution

The U.S. producer reported selling NBR to *** (table II-2). At least one importer of NBR from each subject source reported selling to *** by all seven responding importers. For U.S. producer Zeon, *** percent of its sales were within 100 miles of its production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers sold 4.7 percent within 100 miles of their U.S. point of shipment, 67.8 percent between 101 and 1,000 miles, and 27.5 percent over 1,000 miles.

Table II-2
NBR: Count of U.S. producers' and U.S. importers' geographic markets

Region	U.S. producers	France	Mexico	South Korea	Subject sources
Northeast	***	***	***	***	5
Midwest	***	***	***	***	6
Southeast	***	***	***	***	6
Central Southwest	***	***	***	***	6
Mountain	***	***	***	***	3
Pacific Coast	***	***	***	***	5
Other	***	***	***	***	0
All regions (except Other)	***	***	***	***	3
Reporting firms	***	***	***	***	7

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other U.S. markets include AK, HI, PR, and VI.

Supply and demand considerations

U.S. supply

Table II-3 provides a summary of the supply factors regarding NBR from the U.S. producer and from subject countries. While domestic capacity utilization decreased over 2019-21, capacity utilization increased in each subject country. Domestic producer Zeon *** compared with producers of NBR in subject countries. *** reporting shipping substantial quantities to non-U.S. export markets, with ***.

Table II-3
NBR: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in 1,000 pounds; ratio and share in percent

Factor	Measure	United States	France	Mexico	South Korea	Subject sources
Capacity 2019	Quantity	***	***	***	***	***
Capacity 2021	Quantity	***	***	***	***	***
Capacity utilization 2019	Ratio	***	***	***	***	***
Capacity utilization 2021	Ratio	***	***	***	***	***
Inventories to total shipments 2019	Ratio	***	***	***	***	***
Inventories to total shipments 2021	Ratio	***	***	***	***	***
Home market shipments 2021	Share	***	***	***	***	***
Non-US export market shipments 2021	Share	***	***	***	***	***
Ability to shift production (firms reporting “yes”)	Count	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: U.S. producer Zeon accounted for all U.S. production of NBR in 2021. Responding foreign producer/exporter firms accounted for *** of U.S. imports of NBR from France and Mexico, and *** of imports from South Korea during 2021. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, “Summary Data and Data Sources.”

Domestic production

Based on available information, the U.S. producer of NBR has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced NBR to the U.S. market. The main contributing factors to this degree of responsiveness of supply are ***. Zeon reported that it *** using the same machinery and workers.

Domestic production capacity remained steady during 2019-21 at *** pounds, but capacity utilization declined from *** percent in 2019 to *** percent in 2020 before increasing to *** percent in 2021. Inventory levels declined over the period from *** pounds to *** pounds, or from *** percent of total shipments to *** percent.[14] Exports as a share of total shipments declined from *** percent of total shipments in 2019 to *** percent in 2020 and then increased to *** percent in 2021. Average unit values of exports were slightly higher than the average unit value of domestic shipments in each year, by *** percent. Zeon reported that its major export markets include ***, but noted that ***. Zeon stated that it did not experience any shortages in its U.S. production facilities, although it did face supply constraints with its imported NBR from nonsubject country Japan, due to a planned maintenance shutdown and issues regarding ocean freight availability, as well as its domestically produced ground or particulate NBR due to issues production with its third-party grinder.[15]

Subject imports from France

Based on available information, producers of NBR from France have the ability to respond to changes in demand with large changes in the quantity of shipments of NBR to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the ability to shift shipments from alternate markets. Factors mitigating responsiveness of supply include ***.

[14] Although this is higher than ***, this may be due to the domestic producer only using batch production methods. Batch production allows for smaller runs of a greater variety of formulations. A greater variety of formulations may necessitate a greater base level of available inventory due to longer wait times between one formulation and the next.

[15] Conference transcript, p. 73 (Cail) and hearing transcript, p. 27 (Cail).

French capacity declined by *** percent, but capacity utilization increased by *** percentage points during 2019-21. The ratio of inventories to total shipments decreased by *** percentage points to *** percent. Nearly *** of France's NBR production is exported to third-country markets. Noted export markets include ***.

Subject imports from Mexico

Based on available information, producers of NBR from Mexico have the ability to respond to changes in demand with large changes in the quantity of shipments of NBR to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity, the ability to shift shipments from alternate markets, and the ability to shift production from alternate products (***). Mexican NBR production capacity declined by *** percent, but capacity utilization increased by *** percentage points during 2019-21. The ratio of inventories to total shipments increased slightly by *** percentage points to *** percent. Slightly less than *** of Mexico's NBR production is exported to third-country markets. Noted export markets include ***.

Subject imports from South Korea

Based on available information, producers of NBR from Korea have the ability to respond to changes in demand with moderate changes in the quantity of shipments of NBR to the U.S. market. The main contributing factor to this degree of responsiveness of supply is the ability to shift shipments from alternate markets. Factors mitigating responsiveness of supply include limited availability of unused capacity, low (although slightly increased) inventories, and an inability to shift production to or from the production of alternate products. South Korean capacity did not change, but capacity utilization increased by *** percentage points during 2019-21, reaching *** percent in 2021. The ratio of inventories to total shipments increased slightly to *** percent over the period. More than *** of South Korea's NBR production is exported to third-country markets. Noted export markets include ***.

Imports from nonsubject sources

Nonsubject imports accounted for *** percent of total U.S. imports in 2021. The largest source of nonsubject imports during 2019-21 was Japan, which accounted for more than 70 percent of nonsubject imports over this period.

Supply constraints

U.S. producer Zeon reported that ***. It reported on-time delivery for domestic product of *** percent across its ***. *** has declared multiple force majeures since 2019. ***. ***.[16]

Seven of 16 responding importers reported that they had experienced supply constraints since January 1,2019. Importers *** reported that production curtailments, shortage of equipment, changes in schedules, higher than anticipated GDP growth, logistics disruptions, congested ports, and plant shutdowns due to COVID-19 have led to supply disruptions including product allocation, limited supply, delays, and ***. Importer *** reported that it had experienced longer than normal delays in obtaining material from Zeon's

[16] In its U.S. producer questionnaire response, Zeon noted that "***."

Japan facility before the petition was filed (some April orders were not fulfilled until September or October) and was informed its orders placed with Zeon in February 2022 would not be able to be produced until summer 2022. Importer *** stated that two acrylonitrile producers declared force majeure in February 2021 due to the impact of winter storm Uri, causing shortages of a key monomer, which also raised prices. Importer *** stated that it began receiving inquiries from customers that had been purchasing NBR imported from France and South Korea after the petitions were filed. In addition, *** stated that in addition to ocean freight complications, there is a shortage of truck drivers in the United States that has also contributed to extended lead times and supply constraints.

More than half of responding purchasers reported that supply constraints characterized the NBR market before (21 of 38) the petitions were filed and nearly half (18 of 37) reported constraints after the petitions were filed. Purchasers noted a variety of producers/sources that had constrained supply during the entire period: Zeon, both domestic NBR and product from Japan, Arlanxeo and OMNOVA in France, LG Chemical and Kumho in South Korea. All purchaser descriptions of supply constraints are presented in Appendix E. Regarding the current market situation, Purchaser *** stated generally that "***."

Purchasers were also asked about the availability of NBR from different sources of supply. Seventeen of 34 responding purchasers noted issues with the availability of supply from domestic producer Zeon, 25 of 36 responding purchasers noted issues with the availability of supply from subject sources, and 10 of 25 responding purchasers noted issues with the availability of supply from nonsubject sources. In addition to certain sources not manufacturing certain types of NBR, purchasers also noted the effects of the COVID-19 pandemic and weather, feedstock availability, increased demand, supply chain issues, lead time delays, logistics, port delays, and other transportation issues as issues that affected supply availability. Also noted were strikes in France and the possible exit of LG from the industry in South Korea as causing availability issues. Nonsubject sources mentioned by purchasers included Brazil, Japan, and Russia.

New suppliers

Only 1 of 38 purchasers indicated that any new suppliers had entered the U.S. market since January 1, 2019. ***.

U.S. demand

Based on available information, the overall demand for NBR is likely to experience small to moderate changes in response to changes in price. The main contributing factors are the limited range of substitute products and the moderate share of NBR in most of its end-use products.

End uses and cost share

U.S. demand for NBR depends on the demand for U.S.-produced downstream products. NBR accounts for a moderate share of the cost of the end-use products in which it is used. Reported cost shares for some end uses were as follows:

- Rubber, sheet rubber, and custom rubber mixes (19-60 percent)
- Footwear soles and heels (54 percent)
- Molded parts (50 percent)
- Hydraulic, fuel, and other hoses (14-50 percent)
- Compounds (13 - 50 percent)
- Gaskets, O-rings, and oil seals (7-45 percent)
- Flexible PVC (40 percent)
- Flooring mats (37-40 percent)
- Conveyor and power transmission belts (28-30 percent)
- Thermoplastic elastomers (25 percent)
- Engineered foams (14 percent)
- Insulation (11 percent)
- Wire and cables (10 percent)
- Rubber products (10 percent)
- Garden hose (5 percent)
- Shims (3 percent)
- Structural tape (2-3 percent)
- Automotive brake pads (1 percent)

Business cycles

U.S. producer Zeon stated that demand for NBR is non-seasonal and that the NBR market is ***.[17] Most importers and purchasers reported that the NBR market was not subject to business cycles (12 of 17 responding importers and 30 of 35 responding purchasers) or distinct conditions of competition (13 of 17 responding importers and 31 of 35 responding purchasers). Seasonality reported by importers was focused on the specific industry that the importer sells into. For example, importer *** noted that outdoor re-surfacing work typically occurs in March to October while importer *** reported that demand for NBR increases during the first quarter of the year as customers restock their inventories, that there is a slowdown during the summer season as auto production slows, and customers try to offload their inventories at the end of the year. Importers *** noted that there are some changes in demand related to crude oil production changes as well. Purchaser *** noted the effect that cycles in the automotive and oil and gas sectors have on the demand for NBR. Three purchasers reported seasonal business patterns, with purchaser *** noting that agriculture and increased mileage driven in the warmer seasons can affect demand for NBR. Purchaser *** stated that butadiene "determines pricing" for NBR.

A majority (5 of 9) of responding importers, but only 11 of 29 responding purchasers noted that these distinct cycles or conditions had changed since 2019. Changes referenced by responding firms included the 2020 negative effects of COVID-19, the post-COVID-19 economic rebound along with related increased demand for nitrile rubber gloves, U.S. infrastructure investment, and the automotive production-dampening effects of a microchip shortage. *** noted a change in the way prices are negotiated: LG Chemical no longer offer pricing on a spot basis and Zeon noted in 2021 that it will no longer base prices on a formula. Zeon stated that it changed its pricing basis from a quarterly monomer/ocean freight pricing formula to making changes on a monthly basis in late 2021/early 2022. Multiple purchasers noted that increased NBR raw material costs had an effect on the supply of NBR and the cost to produce it.

[17] Petitioner's postconference brief, p. 22.

Demand trends

*** a plurality of importers reported that U.S. demand for NBR remained constant over 2019-21 (table II-4). However, substantially more importers reported demand had either increased or fluctuated but increased overall than decreased or fluctuated but decreased overall. A majority of purchasers reported that overall U.S. demand increased or fluctuated higher.

Table II-4
NBR: Count of firms' responses regarding overall domestic and foreign demand, by firm type

Market	Firm type	Increase	Fluctuate higher	No change	Fluctuate lower	Decrease
Domestic demand	U.S. producers	***	***	***	***	***
Domestic demand	Importers	4	2	5	0	3
Domestic demand	Purchasers	10	6	10	1	4
Foreign demand	U.S. producers	***	***	***	***	***
Foreign demand	Importers	3	2	4	1	2
Foreign demand	Purchasers	8	6	8	1	2
Demand for end use products	Purchasers	7	10	5	4	5

Source: Compiled from data submitted in response to Commission questionnaires.

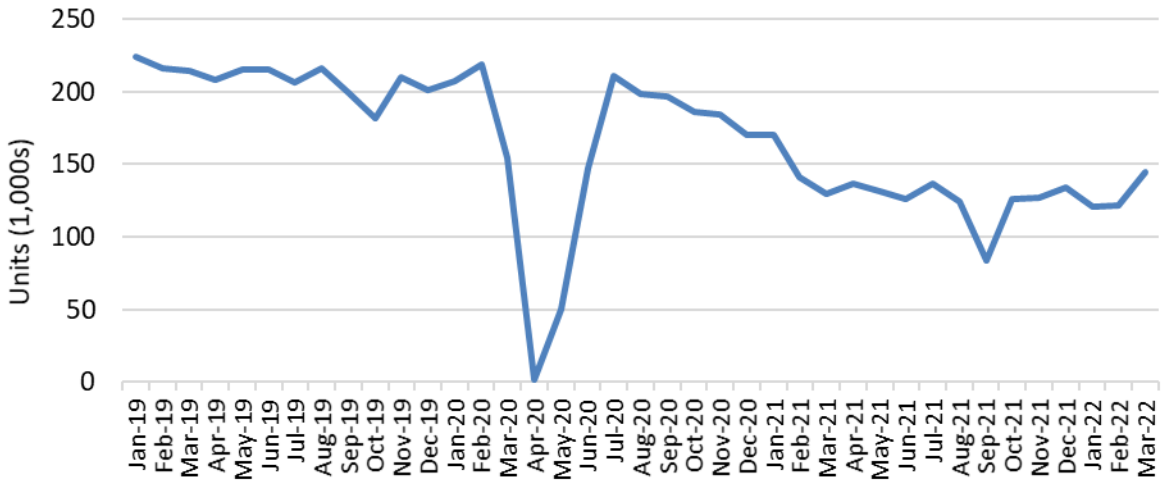
Domestic auto production declined during 2019-21 (see figure II-1 and table II-5). Oil and gas production increased slightly through 2019 before declining through 2020 (figure II-2 and table II-6). Petitioners and respondents indicated that demand for NBR was affected by declines in auto production and sales and in the oil and gas sector in 2020.[18] Similarly, the demand for walk-off mats, which are used in manufacturing plants, restaurants, and casinos, also declined during the COVID-19 pandemic.[19]

[18] Conference transcript, pp. 45, 116, 134-135 (Cail, Quintero); Petitioner's postconference brief, p. 22; Respondent Kumho postconference brief, p. 6.

[19] Conference transcript, pp. 134-135, 143-144 (Kendler, Quintero).

Figure II-1

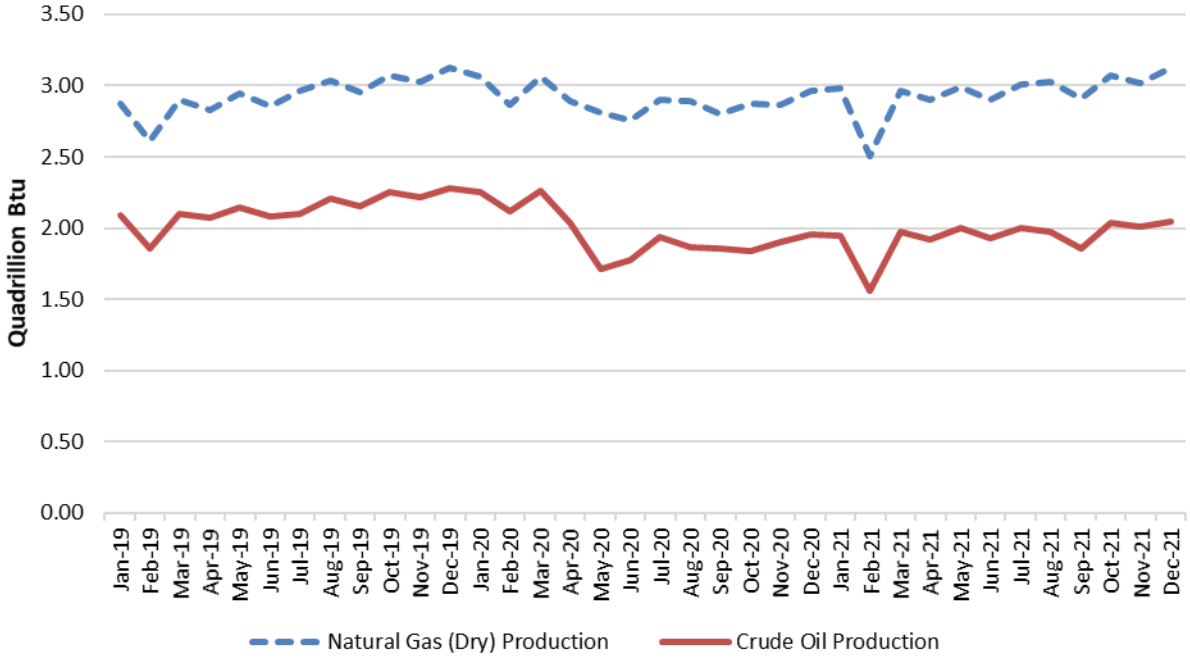
Domestic auto production: Thousands of units, monthly, seasonally adjusted, January 2019-March 2022



Source: Federal Reserve Economic Data, Domestic auto production, retrieved from https://fred.stlouisfed.org/series/DAUPSA, accessed May 4, 2022.

Figure II-2

Oil and gas production: Quadrillion btu, monthly, January 2019-December 2021



Source: EIA, Primary energy production by source, retrieved from https://www.eia.gov/totalenergy/data/monthly/#prices, accessed May 4, 2022.

Table II-5
Domestic auto production: Seasonally adjusted U.S. production, monthly, January 2019-March 2022

Quantity in thousands of units

Year	Month	Quantity
2019	January	223.6
2019	February	216.1
2019	March	214.5
2019	April	208.4
2019	May	215.5
2019	June	215.2
2019	July	206.6
2019	August	216.3
2019	September	199.7
2019	October	181.3
2019	November	209.8
2019	December	201.2
2020	January	207.6
2020	February	218.8
2020	March	154.1
2020	April	1.7
2020	May	49.8
2020	June	146.9
2020	July	211.2
2020	August	198.7
2020	September	196.4
2020	October	186.0
2020	November	184.6
2020	December	170.4
2021	January	170.5
2021	February	141.1
2021	March	129.2
2021	April	136.5
2021	May	131.6
2021	June	125.9
2021	July	136.9
2021	August	124.5
2021	September	84.1
2021	October	126.0
2021	November	126.9
2021	December	134.2
2022	January	120.9
2022	February	121.5
2022	March	144.4

Source: Federal Reserve Economic Data, Domestic auto production, retrieved from https://fred.stlouisfed.org/series/DAUPSA, accessed May 4, 2022.

Table II-6
Oil and gas: U.S. natural gas (dry) and crude oil production, monthly, January 2019-December 2021

Production in quadrillions of British thermal units (btu)

Year	Month	Natural gas (dry) production	Crude oil production
2019	January	2.87	2.09
2019	February	2.61	1.86
2019	March	2.90	2.10
2019	April	2.82	2.07
2019	May	2.94	2.14
2019	June	2.85	2.08
2019	July	2.97	2.10
2019	August	3.04	2.20
2019	September	2.95	2.15
2019	October	3.08	2.26
2019	November	3.03	2.22
2019	December	3.12	2.28
2020	January	3.06	2.26
2020	February	2.86	2.12
2020	March	3.07	2.26
2020	April	2.89	2.03
2020	May	2.81	1.71
2020	June	2.76	1.78
2020	July	2.90	1.93
2020	August	2.89	1.86
2020	September	2.80	1.86
2020	October	2.87	1.84
2020	November	2.86	1.90
2020	December	2.96	1.96
2021	January	2.98	1.95
2021	February	2.50	1.56
2021	March	2.97	1.97
2021	April	2.90	1.92
2021	May	2.99	2.00
2021	June	2.90	1.93
2021	July	3.01	2.00
2021	August	3.03	1.98
2021	September	2.91	1.85
2021	October	3.07	2.03
2021	November	3.02	2.01
2021	December	3.13	2.04

Source: EIA, Primary energy production by source, retrieved from https://www.eia.gov/totalenergy/data/monthly/#prices, accessed May 4, 2022.

Substitute products

U.S. producer Zeon stated that there are few substitutes for NBR for certain applications, such as ***, polychloroprene rubber for ***, and styrene butadiene rubber ("SBR") for some conveyor belting applications; however, substitution is generally limited.[20] Most importers (12 of 15)[21] and purchasers (34 of 38) reported that there are no substitutes for NBR. Substitutes for NBR reported by importers and purchasers were mainly different types of rubber for certain applications, including ethylene propylene diene rubber for sponge insulation and automotive applications, polychloroprene rubber ("CR") for hoses or constant velocity joint ("CVJ") boots, SBR for belting, silicone for shock absorbers, and elvaloy (modified ethylene copolymer resin) for flexible PVC, poly-addition rubber and fluorine rubber ("FKM") for end seal gaskets, and chlorinated polyethylene.

Substitutability issues

This section assesses the degree to which U.S.-produced NBR and imports of NBR from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of NBR from domestic and imported sources based on those factors. Based on available data, staff believes that there is a moderate degree of substitutability between domestically produced NBR and NBR imported from subject sources.[22] Despite being a chemical that must consist of similar inputs, NBR can have differences such as distinctions in formulations based on the level of acrylonitrile contained in the product, the form factor of the product (including Mooney viscosity and granule size), and other factors. In fact, the performance characteristics of the NBR were noted as the most important factor in purchasers' sourcing decisions. Although most purchasers indicated that each source of NBR "always" or "usually" meets specifications, and nearly all sources were rated as comparable on

[20] Petitioner stated that end users generally choose NBR for its specific properties that other potential substitutes do not have, such as toughness, mechanical properties, and heat and fluid resistance. Conference transcript, p. 56 (Cail); Petitioner's postconference brief, exh. 1, p. 2.

[21] ***.

[22] The degree of substitution between domestic and imported NBR depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced NBR to the NBR imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as relative prices (discounts/rebates), quality differences (e.g., grade standards, defect rates, etc.), and differences in sales conditions (e.g., lead times between order and delivery dates, reliability of supply, product services, etc.).

the majority of market factors, most purchasers indicated that NBR sourced from different countries was only "sometimes" interchangeable. Further, while some purchasers noted there were "sometimes" factors other than price that affected purchasing decisions, a large number of purchasers also indicated that there were "always" non-price factors that affected their decisions. The need to qualify a supplier's specific product, which can take years for some purchasers, may limit the substitutability of one supplier's NBR for another supplier's NBR in the purchasers' formulation. The most frequently noted very important factors that purchasers listed related to being able to reliably procure a consistent and consistently available source of NBR that meets performance and quality standards. As noted earlier, multiple factors such as force majeure declarations, logistics issues, and available product lines have somewhat impeded purchasers' ability to do so, especially for NBR produced in the United States, France, and South Korea.

Factors affecting purchasing decisions

Purchaser decisions based on source

As shown in table II-7 most responding purchasers and their customers rarely made decisions based on the country of origin, and if they do, it was only made sometimes. Purchasers and their customers more frequently made decisions based on the producer manufacturing the NBR. Only 9 of 25 purchasers never made the decision with respect to the producer, whereas 13 of 27 responding purchasers note that their customers never make purchasing decisions based on the producer. Although a plurality of purchasers sometimes made their decisions on the basis of the producer, there were only four fewer purchasers that always did so. Of the eight purchasers that reported that they always made decisions based on the manufacturer, most firms cited product qualification/approval/quality issues as the reason for doing so.

Fourteen of 38 purchasers reported that they had a preferred source for the NBR they purchase, ranging from sole-source approval, formulation preferences or requirements, customer specification, and the performance of the product in its incorporation into the end-use product. One purchaser, *** reported a preference for domestic NBR due to the Berry Amendment for U.S. military contracts. Purchaser *** reported that quality problems with NBR from France and Brazil, stating that the products ***.

Table II-7
NBR: Count of purchasers' responses regarding frequency of purchasing decisions based on producer and country of origin

Firm making decision	Decision based on	Always	Usually	Sometimes	Never
Purchaser	Producer	8	8	12	9
Customer	Producer	3	3	8	13
Purchaser	Country	0	1	12	22
Customer	Country	1	0	6	20

Source: Compiled from data submitted in response to Commission questionnaires.

Importance of purchasing domestic product

Thirty of 37 responding purchasers reported that all of their purchases did not require purchasing U.S.-produced product, and five more reported that at least 90 percent of their purchases have no domestic content requirement.[23] One reported that domestic product was required by law, three reported it was required by their customers, and four reported other preferences for domestic product, with all three that noted reasons citing that Zeon is the only approved grade or source for the required type of NBR.

Most important purchase factors

The most often cited top three factors firms consider in their purchasing decisions for NBR were quality (25 firms), availability (25 firms), and price (24 firms) as shown in table II-8. Performance of the product, or it meeting specifications, was the most frequently cited first-most important factor (cited by 15 firms),[24] and it was always cited as the most important factor by those purchasers that consider performance or meeting specifications as an important factor. Quality was second-most frequently cited most important factor (13 firms). Availability was the most frequently cited second-most important factor (10 firms) followed by quality (9 firms). Price was the most frequently reported third-most important factor (14 firms).

[23] The final purchaser reported that 71 percent of its purchases were made without any domestic content requirements.

[24] Although quality and performance/product meets specifications are similar in that they both relate to the physical aspects of the product, a sufficient number of purchasers specifically noted that performance/ product meets specifications as a factor to warrant a separate category.

Table II-8
NBR: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Factor	First	Second	Third	Total
Performance/product meets specifications	15	0	0	15
Quality	13	9	3	25
Availability	5	10	10	25
Price/total cost/cost effective	3	7	14	24
Contracts/contractual obligations	2	2	0	4
Customer preference	1	0	0	1
Reliability/delivery time	0	5	2	7
Product range/line	0	1	0	1
Payment terms	0	0	3	3
All other factors	1	1	1	3

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other factors include "Engineering controlled recipe requires use of same material when qualified," price stability, supplier certification, and traditional supplier.
Note: Purchasers were also given the opportunity to provide more than three factors. Those additional factors listed included price (3 purchasers), quality (1), product range/line (1), relationships (1), reliability/delivery time (1), strategic fit (1), and willingness to develop new grades (1).

The majority of purchasers (22 of 38) reported that they "sometimes" purchase the lowest-priced product that is offered. Eight reported "never" buying the lowest-priced product, eight "usually" do, and one "always" does. *** was the purchaser that reported "always" purchasing the lowest-priced NBR and switched from purchasing NBR imported from Mexico to NBR imported from Russia in 2020.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 18 factors in their purchasing decisions (table II-9). The factors rated as very important by more than half of responding purchasers were availability and reliability of supply (36 each), product consistency (35), meets customer specifications (34), certification/qualification (29), quality meets industry standards (27), price (21), and delivery time (21).

Table II-9
NBR: Count of purchasers' responses regarding importance of purchase factors, by factor

Factor	Very important	Somewhat important	Not important
Availability	36	1	1
Reliability of supply	36	1	1
Product consistency	35	2	1
Meet customer specifications	34	1	2
Certification/Qualification	29	6	3
Quality meets industry standards	27	9	2
Price	21	16	1
Delivery time	21	15	2
Quality exceeds industry standards	17	13	8
Delivery terms	10	24	4
Technical support/service	11	22	5
U.S. transportation costs	8	24	6
Payment terms	9	21	8
Product range	8	22	7
Price lock for > 30 days	5	17	16
Packaging	5	22	11
Discounts offered	2	19	17
Minimum quantity requirements	3	14	20

Source: Compiled from data submitted in response to Commission questionnaires.

Lead times

NBR is primarily sold out of inventories. The U.S. producer reported that *** percent of their commercial shipments were sold from inventory, with lead times averaging *** days. The remaining *** percent of its commercial shipments came from inventories, with lead times averaging *** days. Importers reported that 91.7 percent of their commercial shipments were sold from inventory, with lead times averaging 8 days. The remainder of their commercial shipments are produced-to-order (4.8 percent) or is shipped from foreign inventories (3.5 percent), with lead times averaging 77 and 90 days, respectively.

Supplier certification

Thirty of 38 purchasers require certification of new suppliers. Some purchasers, such as HEXPOL, have customers that require certification which could be "rigorous and costly"[25] ***. On average, purchasers reported that certification/qualification of new suppliers took more than six months. Whereas one purchaser noted it takes 10 days, three purchasers reported that qualification could take up to two years. Three purchasers reported that the length of time "varies" based on the type of material that is to be certified. Purchasers provided a wide range of possible necessary steps before a supplier can become qualified including quality, regulatory, customer, financial, and pricing requirements, along with end product testing. Six of 38 reported that a supplier had failed in its bid to become certified since January 1, 2019. Four did not approve material from Zeon, two did not approve material from Kumho, and two did not approve material from India.

Minimum quality specifications

As can be seen from table II-10, a majority of purchasers with knowledge of product from domestic and subject sources noted that they always met minimum quality specifications, with somewhat fewer noting that the sources usually meet minimum quality specifications. A majority of purchasers with knowledge of nonsubject imports from Japan reported that they always meet minimum quality specification while five purchasers reported that other nonsubject sources always meet minimum quality specifications and five reported that they usually do.

Table II-10
NBR: Count of purchasers' responses regarding suppliers' ability to meet minimum quality specifications, by source

Source of purchases	Always	Usually	Sometimes	Rarely or never	Don't Know
United States	16	6	2	3	11
France	20	7	1	0	9
Mexico	15	5	0	2	16
South Korea	13	6	0	1	18
Japan	13	7	1	0	16
Nonsubject sources	5	5	1	0	17

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Purchasers were asked how often domestically produced or imported NBR meets minimum quality specifications for their own or their customers' uses.

[25] Hearing transcript, p. 168 (Clunk).

Thirty-four of 35 responding purchasers reported factors that determined quality. The most frequent responses listed include performance characteristics like Mooney viscosity, processability/blendability, and meeting specifications; physical characteristics like oil resistance, ACN content, and particle size distribution; product consistency across batches; low contamination rates; certificates of analysis; and packaging.

Interchangeability between types of NBR

The U.S. producer, importers, and purchasers were asked to assess the interchangeability of different types of NBR. First, they were asked to compare NBR with respect to different levels of acrylonitrile (ACN) contained in the NBR. NBR was divided into 5 categories based on the ACN percentage: 1. less than 26 percent; 2. greater than or equal to 26 percent but less than 31 percent; 3. between 31 and 35 percent inclusive; 4. greater than 35 percent but less than or equal to 41 percent; and 5. greater than 41 percent. Table II-11 presents firm responses regarding these comparisons. A majority of purchasers noted that there is never the ability to switch between NBR of different categories, although there were more purchasers that indicated that there was "sometimes" interchangeability between the central and midpoint categories than there were between the endpoint categories and any other category. Importers *** indicated more frequent interchangeability than purchasers, with a majority of importers in each comparison category noting that there is "sometimes" interchangeability.

Table II-11
NBR: Counts of U.S. producer, importer, and purchaser responses regarding interchangeability between NBR of different ACN categories

Comparison pair	Firm type	Always	Frequently	Sometimes	Never
Central ACN vs Endpoint ACN	U.S. producer	***	***	***	***
Central ACN vs Endpoint ACN	Importers	0	1	8	3
Central ACN vs Endpoint ACN	Purchasers	1	0	11	22
Central ACN vs Midpoint ACN	U.S. producer	***	***	***	***
Central ACN vs Midpoint ACN	Importers	0	2	8	2
Central ACN vs Midpoint ACN	Purchasers	1	0	15	18
Endpoint ACN vs Midpoints ACN	U.S. producer	***	***	***	***
Endpoint ACN vs Midpoints ACN	Importers	0	1	9	2
Endpoint ACN vs Midpoints ACN	Purchasers	1	1	10	22

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Central ACN refers to the third, central category (31-35 percent ACN, inclusive), Endpoint ACN refers to categories 1 and 5, and Midpoint ACN refers to those in between the central and endpoint categories, i.e., categories 2 and 4.

Firms were also asked whether NBR produced using batch and continuous processes could be used interchangeably. *** 7 of 10 responding importers, and 15 of 24 responding purchasers indicated that they could be substituted for each other.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2019 (table II-12). Purchasers' responses varied broadly. Eleven purchasers noted increasing purchases from France, but no change in pattern for any other source exceeded eight responses. Half of responding purchasers of NBR from other nonsubject sources (other than Japan) noted increasing nonsubject purchases since 2019. Of the six purchasers reporting decreasing quantities bought from the domestic producer, three noted decreasing demand needs, one noted quality issues, one noted product availability issues, and the remaining purchaser stated that Zeon promoted its product from its Japanese facility, and only bought domestic product in 2019 due to availability issues. Half of the purchasers reported increased purchases of product imported from France reported demand growth or customer patterns as their reason for buying more NBR imported from France. Fourteen of 38 purchasers reported changing suppliers since January 1, 2019, adding suppliers of domestic, subject, and nonsubject NBR. Most frequently new supply sources were sought due to various availability issues. ***.

Table II-12
NBR: Count of purchasers' responses regarding changes in purchase patterns from United States, subject, and nonsubject countries

Source of purchases	Increased	Constant	Decreased	Fluctuated	Did not purchase
United States	4	6	6	5	15
France	11	7	5	5	10
Mexico	3	8	5	5	14
South Korea	3	7	3	6	15
Japan	5	6	3	3	16
Other nonsubject sources	8	6	1	1	16

Source: Compiled from data submitted in response to Commission questionnaires.

Purchase factor comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing NBR produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 18 factors (table II-13) for which they were asked to rate the importance. At least half of purchasers reported that U.S. and subject NBR were comparable for each of the 18 factors. U.S. product was considered inferior more often than superior in every comparison except payment terms, delivery time, and technical support/ service from France. When comparing NBR from subject sources with each other, and to nonsubject sources, a majority found each factor comparable.

Table II-13
NBR: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs France	2	12	8
Reliability of supply	U.S. vs France	2	11	4
Product consistency	U.S. vs France	0	14	3
Meet customer specifications	U.S. vs France	1	16	2
Certification/Qualification	U.S. vs France	1	15	5
Quality meets industry standards	U.S. vs France	0	15	2
Price	U.S. vs France	0	12	5
Delivery time	U.S. vs France	5	9	5
Quality exceeds industry standards	U.S. vs France	0	14	3
Delivery terms	U.S. vs France	3	13	4
Technical support/service	U.S. vs France	4	13	3
U.S. transportation costs	U.S. vs France	2	13	4
Payment terms	U.S. vs France	3	14	3
Product range	U.S. vs France	0	15	5
Price lock for > 30 days	U.S. vs France	1	12	2
Packaging	U.S. vs France	0	15	5
Discounts offered	U.S. vs France	0	12	3
Minimum quantity requirements	U.S. vs France	0	13	7

Table continued.

Table II-13 Continued
NBR: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Mexico	1	9	6
Reliability of supply	U.S. vs Mexico	0	9	5
Product consistency	U.S. vs Mexico	0	12	1
Meet customer specifications	U.S. vs Mexico	0	13	1
Certification/Qualification	U.S. vs Mexico	1	12	2
Quality meets industry standards	U.S. vs Mexico	0	13	1
Price	U.S. vs Mexico	2	6	5
Delivery time	U.S. vs Mexico	0	10	5
Quality exceeds industry standards	U.S. vs Mexico	1	10	2
Delivery terms	U.S. vs Mexico	1	9	4
Technical support/service	U.S. vs Mexico	2	8	4
U.S. transportation costs	U.S. vs Mexico	1	11	3
Payment terms	U.S. vs Mexico	1	10	4
Product range	U.S. vs Mexico	1	9	5
Price lock for > 30 days	U.S. vs Mexico	1	8	2
Packaging	U.S. vs Mexico	1	11	3
Discounts offered	U.S. vs Mexico	0	8	3
Minimum quantity requirements	U.S. vs Mexico	0	11	3

Table continued.

Table II-13 Continued
NBR: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs South Korea	1	10	5
Reliability of supply	U.S. vs South Korea	0	10	4
Product consistency	U.S. vs South Korea	0	12	2
Meet customer specifications	U.S. vs South Korea	0	13	2
Certification/Qualification	U.S. vs South Korea	1	12	2
Quality meets industry standards	U.S. vs South Korea	0	13	2
Price	U.S. vs South Korea	0	7	7
Delivery time	U.S. vs South Korea	0	12	3
Quality exceeds industry standards	U.S. vs South Korea	1	10	3
Delivery terms	U.S. vs South Korea	1	12	2
Technical support/service	U.S. vs South Korea	1	10	4
U.S. transportation costs	U.S. vs South Korea	1	10	4
Payment terms	U.S. vs South Korea	0	11	4
Product range	U.S. vs South Korea	1	9	5
Price lock for > 30 days	U.S. vs South Korea	0	9	3
Packaging	U.S. vs South Korea	0	11	4
Discounts offered	U.S. vs South Korea	0	9	3
Minimum quantity requirements	U.S. vs South Korea	0	11	4

Table continued.

Table II-13 Continued
NBR: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Nonsubject	0	13	2
Reliability of supply	U.S. vs Nonsubject	1	12	2
Product consistency	U.S. vs Nonsubject	0	13	2
Meet customer specifications	U.S. vs Nonsubject	0	7	7
Certification/Qualification	U.S. vs Nonsubject	0	12	3
Quality meets industry standards	U.S. vs Nonsubject	1	10	3
Price	U.S. vs Nonsubject	1	12	2
Delivery time	U.S. vs Nonsubject	1	10	4
Quality exceeds industry standards	U.S. vs Nonsubject	1	10	4
Delivery terms	U.S. vs Nonsubject	0	11	4
Technical support/service	U.S. vs Nonsubject	1	9	5
U.S. transportation costs	U.S. vs Nonsubject	0	9	3
Payment terms	U.S. vs Nonsubject	0	11	4
Product range	U.S. vs Nonsubject	0	9	3
Price lock for > 30 days	U.S. vs Nonsubject	0	11	4
Packaging	U.S. vs Nonsubject	1	10	5
Discounts offered	U.S. vs Nonsubject	1	10	5
Minimum quantity requirements	U.S. vs Nonsubject	1	10	5

Source: Compiled from data submitted in response to Commission questionnaires.

Note: A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Comparison of U.S.-produced and imported NBR

In order to determine whether U.S.-produced NBR can generally be used in the same applications as imports from France, Mexico, and South Korea, the U.S. producer, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. Petitioner Zeon reported *** interchangeable. As shown in table II-14, importers' responses indicated that NBR from one source is either sometimes or frequently interchangeable with NBR from other sources. Table II-15 shows that for most comparisons made by purchasers, NBR from one source is sometimes interchangeable with that from another source. The exceptions are for comparisons between NBR from South Korea and nonsubject sources (Japan and all other), in which purchasers reported their interchangeability to be "frequently" more often than "sometimes." Importers and purchasers reporting differences between sources indicated five main reasons: certain grades are not available or approved from certain sources (10 firms), different behavior in applications by NBR from different sources (8), their sourcing is customer-directed or customer-approved (5), qualification/certification issues (4), and quality differences (2).

Table II-14
NBR: Count of U.S. importers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. France	***	***	***	***
U.S. vs. Mexico	***	***	***	***
U.S. vs. South Korea	***	***	***	***
France vs. Mexico	***	***	***	***
France vs. South Korea	***	***	***	***
Mexico vs. South Korea	***	***	***	***
U.S. vs. Japan	***	***	***	***
U.S. vs. other	***	***	***	***
France vs. Japan	***	***	***	***
France vs. other	***	***	***	***
Mexico vs. Japan	***	***	***	***
Mexico vs. other	***	***	***	***
South Korea vs. Japan	***	***	***	***
South Korea vs. other	***	***	***	***
Japan vs. other	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-15
NBR: Count of purchasers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. France	2	3	13	7
U.S. vs. Mexico	2	3	11	4
U.S. vs. South Korea	2	6	8	3
France vs. Mexico	1	3	13	4
France vs. South Korea	2	4	8	3
Mexico vs. South Korea	2	3	8	3
U.S. vs. Japan	1	4	7	5
U.S. vs. other	1	3	5	2
France vs. Japan	3	3	11	3
France vs. other	2	2	6	1
Mexico vs. Japan	1	4	7	2
Mexico vs. other	1	3	5	1
South Korea vs. Japan	2	5	4	2
South Korea vs. other	2	4	3	1
Japan vs. other	2	3	5	1

Source: Compiled from data submitted in response to Commission questionnaires.

Petitioner Zeon noted that it has the technical ability to produce more than 60 grades of NBR at its domestic facility, and that "with the exception of maybe one or two grades out of a portfolio of 60-plus grades … the vast majority, upper 50s of the 60 or so grades, can be produced in both {the United States and Japan}."[26] Respondent Arlanxeo, however, noted that having the technical ability to produce different grades is not the same as producing those grades needed by U.S. purchasers and their end-use customers.[27] Petitioner noted that it "produces a significant volume and variety of the NBR … as one-to-one substitutes for different NBR grades supplied by foreign producers" and that its U.S. plant has produced "equivalent substitutes for *** percent of all NBR grades supplied to the U.S. market since 2018."[28]

[26] Hearing transcript, p. 125 (Cail).
[27] Respondent Arlanxeo's posthearing brief, p. 3.
[28] Petitioner's posthearing brief, pp. 3-4, annex III, and exh. III-1. In Exh. III-1, ***.

However, multiple purchasers listed exact grades for which they were unable to use domestic equivalents. Others noted that, generally, there were no domestic substitutes for the grades that they use. Respondents argue that there are numerous grades of NBR that are unavailable domestically - or for which Zeon would use imports from its Japanese parent company to supply - and listed grades noted by purchasers which were unavailable domestically based on quality, performance, and/or availability reasons.[29] Mountville, a large purchaser of floor mats, also noted that Zeon has insufficient capacity in the United States to produce the grade of NBR it requires.[30] Another purchaser noted that for larger orders with consistency requirements, NBR produced using a continuous process will yield better results.[31]

In addition, the U.S. producer, importers, and purchasers were asked to assess how often differences other than price were significant in sales of NBR from the United States, subject, and nonsubject countries. Petitioner Zeon reported that there are *** differences between NBR produced in the United States and that produced in France, Mexico, and Japan, but there are *** differences between all the other country pairs. As seen in table II-16, at least one importer noted that there are never, sometimes or frequently factors other than price in the NBR market for each comparison. *** reported that there are always differences between the U.S. product and that imported from France and Mexico. Importer *** reported that availability has become a difference between the U.S. product and that imported from France since the announcement of antidumping duties, and importer *** listed lead times, quality, and product range as differentiating factors between NBR from the United States and that imported from Mexico. As reported by purchasers in table II-17, a plurality of purchasers indicated that there are always factors other than price that are important in distinguishing U.S. NBR from French NBR and Mexican NBR. Six purchasers also noted there are always non-price differences between NBR from the United States and South Korea, and seven noted there are always non-price differences between NBR produced in France and Mexico. Grade/material availability, quality, and technical characteristics were most often cited as reasons for differences.

[29] Respondent Arlanxeo's posthearing brief, responses to questions, pp. 39-40, Respondents Dynasol and Negromex's posthearing brief, exh. 1, pp. 5-11, Respondents ITT, Inc. and WAM's posthearing brief, pp. 4-7, and Respondent Kumho's posthearing brief, exh. 1, p. 4 and pp. 5-8.

[30] Hearing transcript, pp. 152-153 (Hart).

[31] Ibid, pp. 241-242 (Plaza).

Table II-16
NBR: Count of importers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. France	***	***	***	***
U.S. vs. Mexico	***	***	***	***
U.S. vs. South Korea	***	***	***	***
France vs. Mexico	***	***	***	***
France vs. South Korea	***	***	***	***
Mexico vs. South Korea	***	***	***	***
U.S. vs. Japan	***	***	***	***
U.S. vs. other	***	***	***	***
France vs. Japan	***	***	***	***
France vs. other	***	***	***	***
Mexico vs. Japan	***	***	***	***
Mexico vs. other	***	***	***	***
South Korea vs. Japan	***	***	***	***
South Korea vs. other	***	***	***	***
Japan vs. other	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-17
NBR: Count of purchasers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. France	11	3	6	4
U.S. vs. Mexico	8	2	7	2
U.S. vs. South Korea	6	2	7	3
France vs. Mexico	7	2	7	3
France vs. South Korea	3	2	7	4
Mexico vs. South Korea	3	2	5	4
U.S. vs. Japan	4	2	6	3
U.S. vs. other	3	2	4	1
France vs. Japan	6	2	7	4
France vs. other	3	2	4	2
Mexico vs. Japan	3	1	5	5
Mexico vs. other	2	2	4	1
South Korea vs. Japan	1	2	5	6
South Korea vs. other	2	2	4	1
Japan vs. other	1	2	5	1

Source: Compiled from data submitted in response to Commission questionnaires.

Elasticity estimates

This section discusses elasticity estimates; parties were encouraged to comment on these estimates. Parties did not comment on demand or supply elasticities.

U.S. supply elasticity

The domestic supply elasticity for NBR measures the sensitivity of the quantity supplied by the U.S. producer to changes in the U.S. market price of NBR. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which Zeon can alter capacity, its ability to shift somewhat to production of other products, *** of inventories, and the *** alternate markets for U.S.-produced NBR. Analysis of these factors above indicates that the U.S. industry has the ability to increase or decrease shipments to the U.S. market to a *** degree; an estimate in the range of 6 to 10 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for NBR measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of NBR. This estimate depends on factors discussed above such as the reformulations that would be necessary to switch to non-NBR inputs in the manufacture of downstream products (since reformulation and certification of new suppliers is required even among NBR products), as well as the nontrivial component share of the NBR in the production of any downstream products. Based on the available information, the aggregate demand for NBR is likely to be moderately to highly inelastic based on usage; a range of -0.25 to -0.75 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[32] Product differentiation, in turn, depends upon such factors as product performance, quality (e.g., chemistry, appearance, etc.), product certification or qualification, and conditions of sale (e.g., availability of specific formulations and grades, reliability of delivery, sales terms/discounts/promotions, etc.). Whereas certain purchasers are more able to substitute NBR from one source for another, others have stricter NBR needs and are not as easily able to switch between NBR from different sources for these reasons. Based on available information, the elasticity of substitution between U.S.-produced NBR and imported NBR is likely to be in the range of 2 to 4.

Petitioner Zeon argues that the elasticity of substitution is likely higher than "moderate," describing it as "somewhere between a moderate and significant amount of substitutional elasticity from supply sources for the same grade of NBR, and the same grade being the same Mooney viscosity, same ACN cost,"[33] "highly substitutable,"[34] "largely substitutable,"[35] or having "very high substitution elasticity."[36] Multiple respondents noted agreement with the Commission staff characterization of "moderately" substitutable.[37] No party, however, offered an alternative estimate to the likely substitution elasticity range from the prehearing staff report.

[32] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

[33] Hearing transcript, p. 145 (Arkan).

[34] Petitioner's posthearing brief, p. 5.

[35] Petitioner's prehearing brief, p. 2.

[36] Petitioner's prehearing brief, p. 21.

[37] *See, e.g.,* hearing transcript, p. 185 (Kendler) and p. 208 (Peterson).

Part III: U.S. producers' production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire response of one firm that accounted for 100 percent of U.S. production of NBR during 2021.

U.S. producer

The Commission issued a U.S. producer questionnaire to one firm, Zeon, based on information contained in the petitions. Zeon provided usable data on its operations. Staff believes that this response represents all U.S. production of NBR.[1]

Table III-1 presents U.S. producer Zeon, its production locations, position on the petitions, and share of total production.

Table III-1
NBR: U.S. producer, its position on the petitions, production locations, and share of reported production, 2021

Firm	Position on petitions	Production location(s)	Share of production
Zeon	Petitioner	Louisville, KY	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[1] Zeon is the only known U.S. producer of NBR. Conference transcript, pp. 12-13 (Recchio), p. 118 (Quintero). Lion Elastomers LLC, announced on October 27, 2021, that it would be starting production of NBR in the second half of 2022. Petitioner's prehearing brief, p. 19 and exhibit 6, and hearing transcript, p. 258 (Arkan). ***. Email from *** of ***, June 7, 2022.

Table III-2 presents information on U.S. producer Zeon's ownership, related and/or affiliated firms.

Table III-2
NBR: U.S. producer Zeon's ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
Zeon	***	***
Zeon	***	***
Zeon	***	***

Source: Compiled from data submitted in response to Commission questionnaires, petitioner's postconference brief, pp. 28-29.

As indicated in table III-2, Zeon *** related to subject producers of NBR and *** related to U.S. importers of NBR from subject sources. Zeon *** directly import NBR from subject sources and *** purchase NBR from subject sources from U.S. importers. Zeon, however, is a wholly owned subsidiary of Zeon Corporation, a Japanese producer of NBR, ***. Zeon also directly imports NBR from ***.[2]

Table III-3 presents U.S. producer Zeon's reported changes in operations since January 1, 2019.

Table III-3
NBR: U.S. producer Zeon's reported changes in operations, since January 1, 2019

Item	Firm name and narrative response on changes in operations
Other	***

Source: Compiled from data submitted in response to Commission questionnaires.

[2] Zeon accounted for ***. See part IV for more information on imports from ***.

U.S. production, capacity, and capacity utilization

Table III-4 and figure III-1 present U.S. producer Zeon's production, capacity, and capacity utilization. Production decreased by *** percent during 2019-20, then increased by *** percent during 2020-21, for an overall *** percent decrease during 2019-21.[3] ***.[4] Zeon states that these ***.[5]

[3] Zeon ***. *See* Zeon's U.S. producers' questionnaire response, question II-5, and email from ***, July 20, 2021. ***. Email from ***, April 28, 2022.

[4] Zeon's U.S. producers' questionnaire response, question II-2b and email from ***, May 27, 2022.

[5] Email from ***, June 3, 2022. ***.

Given that capacity was unchanged during 2019-21,[6] capacity utilization trends mirrored production trends. Capacity utilization decreased by *** percentage points during 2019-20 and increased by *** percentage points during 2020-21, for an overall decrease in capacity utilization of *** percentage points during 2019-21.

[6] Capacity was calculated based on operating *** hours per week, and *** weeks per year. Production constraints include: ***. Zeon's U.S. producers' questionnaire response, questions II-3d and II-7.

Table III-4
NBR: U.S. producer Zeon's average production capacity, production, and capacity utilization, by period

Quantities in 1,000 pounds; ratios and shares in percent

Firm	Measure	2019	2020	2021
Capacity	Quantity	***	***	***
Production: NIBR	Quantity	***	***	***
Production: XNBR	Quantity	***	***	***
Production: All other NBR	Quantity	***	***	***
Production: All NBR	Quantity	***	***	***
Capacity utilization	Ratio	***	***	***
Production: NIBR	Share	***	***	***
Production: XNBR	Share	***	***	***
Production: All other NBR	Share	***	***	***
Production: All NBR	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: NIBR is "acrylonitrile-isoprene-butadiene rubber" and is produced by incorporating isoprene during the production (polymerization) process of NBR. XNBR is "carboxylated NBR" and is produced by incorporating methacrylic acid during the production (polymerization) process of NBR.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Figure III-1
NBR: U.S. producer Zeon's capacity, production, and capacity utilization, by period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Zeon produced *** NBR using batch production and *** NBR using continuous production.[7] Around *** of Zeon's NBR production consisted of XNBR, with the remaining *** consisting of all other NBR during 2019-2021. Zeon reported *** production of NIBR during 2019-2021.

Zeon reported that it ***. In 2021, around *** percent (*** pounds) of Zeon's U.S.-produced NBR was sold to U.S. customers that required a custom specification. The most common custom specifications requested were: ***. In 2021, around *** percent (*** pounds) of Zeon's U.S.-produced NBR was custom-produced and only sold to one customer, including ***.

[7] Continuous production is an NBR production process that relies on a series of linked reactors through which producers feed input monomers to generate NBR. Batch production as an NBR production process in which producers feed input monomers into separate reactors that are not linked in a series (see part I for further details).

Alternative products

As shown in table III-5, between *** and *** percent of the product produced during 2019-21 by U.S. producer Zeon was NBR. Zeon reported production of *** using the same machinery or workers used to produce NBR. During 2019-21, out-of-scope production increased by *** percent and its share of total production increased by *** percentage points.

Zeon reported that ***. With respect to workers, ***.[8]

Table III-5
NBR: U.S. producer Zeon's overall capacity and production on the same equipment as subject production, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2019	2020	2021
Overall capacity	Quantity	***	***	***
NBR production	Quantity	***	***	***
Out-of-scope production: Latex NBR	Quantity	***	***	***
Out-of-scope production: Other products	Quantity	***	***	***
Out-of-scope production: All products	Quantity	***	***	***
Total production	Quantity	***	***	***
Overall capacity utilization	Ratio	***	***	***
NBR production	Share	***	***	***
Out-of-scope production: Latex NBR	Share	***	***	***
Out-of-scope production: Other products	Share	***	***	***
Out-of-scope production: All products	Share	***	***	***
Total production	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---". "Out-of-scope production: Latex NBR" does not include latex NBR that was used to produce in-scope NBR.

[8] Zeon's U.S. producers' questionnaire response, question II-4(b).

U.S. producer's U.S. shipments and exports

Table III-6 presents U.S. producer Zeon's U.S. shipments, export shipments, and total shipments. Total shipments increased during 2019-21, by *** percent in quantity and *** percent in value.

Both U.S. shipments and export shipments decreased from 2019 to 2020, then increased from 2020 to 2021.[9] U.S. shipments decreased during 2019-20 by quantity (*** percent) and value (*** percent), then increased during 2020-2021 by quantity (*** percent) and value (*** percent), for an overall decrease in quantity (*** percent) and increase in value (*** percent) during 2019-21. Export shipments decreased during 2019-20 by quantity (*** percent) and value (*** percent), then increased during 2020-21 by quantity (*** percent) and value (*** percent), for an overall 2019-2021 increase in quantity (*** percent) and value (*** percent).[10]

Average unit values for both U.S. shipments and export shipments decreased from 2019-20, then increased from 2020-21. U.S. shipment, export shipment, and total shipment average unit values increased overall during 2019-21 by *** percent, *** percent, and *** percent, respectively.

The share of total shipments (by quantity) accounted for by export shipments ranged from *** to *** percent throughout the period for which data were collected. Zeon exported NBR to ***.

[9] ***. Zeon's U.S. producers' questionnaire response, question II-2b.

[10] ***. Zeon's U.S. producers' questionnaire response, question II-2b.

Table III-6
NBR: U.S. producer Zeon's shipments, by destination and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound; shares in percent

Item	Measure	2019	2020	2021
U.S. shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-7 presents U.S. producer Zeon's U.S. shipments by shipment type (i.e., commercial shipments and internal consumption). *** percent of Zeon's U.S. shipments, by quantity, consisted of commercial shipments throughout the period for which data were collected.

U.S. commercial shipments decreased during 2019-20 by *** percent in quantity and *** percent in value, then increased during 2020-21 by *** percent in quantity and *** percent in value, for an overall decrease in quantity by *** percent and increase in value by *** percent during 2019-21.

Internal consumption increased in quantity (*** percent) and value (*** percent) during 2019-21. Zeon internally consumes NBR to produce ***. It also reported ***[11] ***

[11] Zeon explained ***. Email from ***, July 28, 2021.

***.[12] Internal consumption increased during 2019-21 because ***.[13]

Both U.S. commercial shipment and internal consumption average unit values increased during 2019-21, by *** percent and *** percent, respectively.

Table III-7
NBR: U.S. producer Zeon's U.S. shipments, by type and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound; shares in percent

Item	Measure	2019	2020	2021
Commercial U.S. shipments	Quantity	***	***	***
Internal consumption	Quantity	***	***	***
U.S. shipments	Quantity	***	***	***
Commercial U.S. shipments	Value	***	***	***
Internal consumption	Value	***	***	***
U.S. shipments	Value	***	***	***
Commercial U.S. shipments	Unit value	***	***	***
Internal consumption	Unit value	***	***	***
U.S. shipments	Unit value	***	***	***
Commercial U.S. shipments	Share of quantity	***	***	***
Internal consumption	Share of quantity	***	***	***
U.S. shipments	Share of quantity	100.0	100.0	100.0
Commercial U.S. shipments	Share of value	***	***	***
Internal consumption	Share of value	***	***	***
U.S. shipments	Share of value	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[12] *** U.S. shipments of NBR that were reported as internal consumption were sold as is (i.e., diverted back into the open market for NBR). Zeon's preliminary phase U.S. producers' questionnaire, question II-10.

[13] Email from ***, July 28, 2021.

U.S. producer's inventories

Table III-8 presents U.S. producer Zeon's end-of-period inventories and the ratio of these inventories to U.S. producer Zeon's production, U.S. shipments, and total shipments**.** End-of-period inventories decreased by *** percent during 2019-21. The inventory ratio to U.S. production, U.S. shipments, and total shipments each increased from 2019 to 2020, then decreased from 2020 to 2021. During 2019-21, the inventory ratio to U.S. production decreased by *** percentage points, the inventory ratio to U.S. shipments decreased by *** percentage points, and the inventory ratio to total shipments decreased by *** percentage points.

Table III-8
NBR: U.S. producer Zeon's inventories and their ratio to select items, by period

Quantity in 1,000 pounds; ratio in percent

Item	2019	2020	2021
End-of-period inventory quantity	***	***	***
Inventory ratio to U.S. production	***	***	***
Inventory ratio to U.S. shipments	***	***	***
Inventory ratio to total shipments	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. employment, wages, and productivity

Table III-9 shows the U.S. producer's employment-related data. Production and related workers (PRWs) increased by *** percent during 2019-20 and returned to 2019 levels in 2021.[14] Total hours worked and hours worked per PRW decreased *** percent during 2019-21. Wages paid increased by *** percent and hourly wages increased by *** percent during 2019-21, while production decreased, resulting in decreased productivity by *** pounds per hour and increased unit labor costs by *** per pound.[15]

Table III-9
NBR: U.S. producer Zeon's employment related information, by period

Item	2019	2020	2021
Production and related workers (PRWs) (number)	***	***	***
Total hours worked (1,000 hours)	***	***	***
Hours worked per PRW (hours)	***	***	***
Wages paid ($1,000)	***	***	***
Hourly wages (dollars per hour)	***	***	***
Productivity (pounds per hour)	***	***	***
Unit labor costs (dollars per pound)	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[14] ***. Zeon's U.S. producers' questionnaire response, question II-2b.
[15] ***. Zeon's U.S. producers' questionnaire response, question II-2b.

Part IV: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to 25 firms believed to be importers of subject NBR, including U.S. producer Zeon.[1] Usable questionnaire responses were received from 18 companies,[2] representing an estimated *** percent of U.S. imports from France,[3] *** U.S. imports from Mexico,[4] *** percent of U.S. imports from South Korea, ***

[1] The Commission issued questionnaires to those firms identified in the petitions, along with firms that, based on a review of data from third-party sources, may have accounted for more than one percent of total imports under HTS subheading 4002.59.00 in 2021.

[2] Three firms, ***, certified that they have not imported NBR into the United States since January 1, 2019. Two firms, *** were not responsive. Two firms confirmed that they imported NBR into the United States since January 1, 2019, but did not complete an importer questionnaire: ***.

[3] *** imported from France *** pounds of out-of-scope merchandise under HTS subheading 4002.59.00 in 2021. Subtracting this quantity from official import statistics, questionnaire responses account for *** percent of official import statistics for France in 2021. ***. Email from ***, April 12, 2022. The quantities of imports from France reported by *** and ***, the two firms that did not complete an importer questionnaire, accounted for *** percent of 2021 official import statistics for France (after adjusting for out-of-scope merchandise imported by ***). Therefore, staff estimate questionnaire responses account for *** percent of imports from France in 2021.

[4] After adjusting for *** pounds of out-of-scope merchandise imported in 2021 by *** under HTS subheading 4002.59.00, questionnaire responses accounted for *** percent of 2021 official import statistics. ***. Therefore, staff believe *** accounts for all NBR imported from Mexico. The difference between questionnaire data and official import statistics is likely due to timing differences as to when imports are accounted for, as questionnaire coverage was *** percent in 2019.

percent of U.S. imports from the largest nonsubject source Japan,[5] and *** percent of U.S. imports from all other sources in 2021 under HTS subheading 4002.59.00. Table IV-1 lists all responding U.S. importers of NBR from France, Mexico, South Korea, nonsubject source Japan,[6] and all other sources, their locations, and their shares of U.S. imports, in 2021.

Table IV-1
NBR: U.S. importers, their headquarters, and share of imports within each source, 2021

Share in percent

Firm	Headquarters	France	Mexico	South Korea	Subject sources
Advance	Schaumburg, IL	***	***	***	***
Arlanxeo USA	Pittsburgh, PA	***	***	***	***
Armacell	Chapel Hill, NC	***	***	***	***
ARP	Amherst, NY	***	***	***	***
Axiom	Akron, OH	***	***	***	***
Cascadia	Redmond, WA	***	***	***	***
ContiTech	Fairlawn, OH	***	***	***	***
Dynasol	Houston, TX	***	***	***	***
HB Chemical	Twinsburg, OH	***	***	***	***
Intertex	Carrollton, GA	***	***	***	***
LG Chem America	Atlanta, GA	***	***	***	***
Milin	Simcoe, ON	***	***	***	***
Mitsui	White Plains, NY	***	***	***	***
OMNOVA USA	Beachwood, OH	***	***	***	***
Parker Hannafin	Cleveland, OH	***	***	***	***
Posco	Anaheim, CA	***	***	***	***
T.L. Squire	Akron, OH	***	***	***	***
Zeon	Louisville, KY	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0

Table continued.

[5] *** imported *** pounds of NBR from Japan under an HTS subheading other than 4002.59.00 in 2021. Therefore, this quantity was added to official import statistics data under HTS subheading 4002.59.00 to estimate questionnaire coverage for imports from Japan in 2021.

[6] ***. Zeon's U.S. importers' questionnaire response, question II-4.

Table IV-1 Continued
NBR: U.S. importers, their headquarters, and share of imports within each source, 2021

Share in percent

Firm	Headquarters	Japan	All other sources	Nonsubject sources	All import sources
Advance	Schaumburg, IL	***	***	***	***
Arlanxeo USA	Pittsburgh, PA	***	***	***	***
Armacell	Chapel Hill, NC	***	***	***	***
ARP	Amherst, NY	***	***	***	***
Axiom	Akron, OH	***	***	***	***
Cascadia	Redmond, WA	***	***	***	***
ContiTech	Fairlawn, OH	***	***	***	***
Dynasol	Houston, TX	***	***	***	***
HB Chemical	Twinsburg, OH	***	***	***	***
Intertex	Carrollton, GA	***	***	***	***
LG Chem America	Atlanta, GA	***	***	***	***
Milin	Simcoe, ON	***	***	***	***
Mitsui	White Plains, NY	***	***	***	***
OMNOVA USA	Beachwood, OH	***	***	***	***
Parker Hannafin	Cleveland, OH	***	***	***	***
Posco	Anaheim, CA	***	***	***	***
T.L. Squire	Akron, OH	***	***	***	***
Zeon	Louisville, KY	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

U.S. imports

Table IV-2 presents data for U.S. imports of NBR from France, Mexico, South Korea, nonsubject source Japan, and all other sources.[7]

Import quantities and values from France, South Korea, total subject sources, and all other sources each decreased during 2019-20, then increased from 2020-21, with overall increases during the 2019-21 period. Importers *** cited COVID-19 as the reason for their U-shaped importing trends over the 2019-21 period. ***. In addition to the COVID-19 recovery, ***.[8] On the other hand, imports from Mexico,[9] nonsubject source Japan, and total nonsubject sources decreased overall during 2019-21.

Average unit values (AUVs) of imports from subject sources were lower than AUVs of nonsubject sources throughout the period for which data were collected. AUVs for each import source decreased from 2019 to 2020, then increased from 2020 to 2021.[10]

Imports from subject sources increased as a share of total imports, by quantity, over each comparison in the data collection period, with the highest share reported in 2021 period, at *** percent. Imports from nonsubject sources decreased as a share of total imports, by quantity, during 2019-21 by *** percentage points.[11]

During 2019-21, the ratio of subject imports to U.S. production increased from *** to *** percent, while the ratio of nonsubject imports to U.S. production decreased, from *** to ***.

[7] Table IV-2 is compiled from data submitted in response to Commission questionnaires. Official import statistics for HTS subheading 4002.59.00 are presented in appendix F.

[8] Email from ***, March 20, 2022.

[9] ***. *** U.S. importers' questionnaire response, question III-14.

[10] A decrease in demand and raw materials prices in 2020 that put downward pressure on NBR prices were cited as reasons for lower average unit values in 2020 than in 2019 and 2021. Emails from ***, April 8, 2022, and ***, April 21, 2022.

[11] The share of imports from Japan decreased by *** percent, while the share of imports from all other sources increased by *** percent during 2019-21.

Several importers continue to report challenges related to COVID-19, including continued decreased demand in the automotive sector, supply chain bottlenecks as overall NBR demand begins to recover, logistics and transportation delays, increased lead times, and uncertainty in arrival schedules.[12]

Table IV-2
NBR: U.S. imports by source and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound

Source	Measure	2019	2020	2021
France	Quantity	***	***	***
Mexico	Quantity	***	***	***
South Korea	Quantity	***	***	***
Subject sources	Quantity	72,219	54,068	73,423
Japan	Quantity	***	***	***
All other sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
France	Value	***	***	***
Mexico	Value	***	***	***
South Korea	Value	***	***	***
Subject sources	Value	77,912	49,427	84,561
Japan	Value	***	***	***
All other sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
France	Unit value	***	***	***
Mexico	Unit value	***	***	***
South Korea	Unit value	***	***	***
Subject sources	Unit value	1.08	0.91	1.15
Japan	Unit value	***	***	***
All other sources	Unit value	***	***	***
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***

Table continued.

[12] U.S. importers' questionnaire, question II-2b, and foreign producer/exporter questionnaire, question II-2b.

Table IV-2 Continued
NBR: Share of U.S. imports by source and period

Share and ratio in percent

Source	Measure	2019	2020	2021
France	Share of quantity	***	***	***
Mexico	Share of quantity	***	***	***
South Korea	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Japan	Share of quantity	***	***	***
All other sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0
France	Share of value	***	***	***
Mexico	Share of value	***	***	***
South Korea	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Japan	Share of value	***	***	***
All other sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	100.0	100.0	100.0
France	Ratio	***	***	***
Mexico	Ratio	***	***	***
South Korea	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Japan	Ratio	***	***	***
All other sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

Table continued.

Table IV-2 Continued
NBR: Percentage change of U.S. imports by source and period

%Δ in percent

Source	Measure	2019-21	2019-20	2020-21
France	%Δ Quantity	▲***	▼***	▲***
Mexico	%Δ Quantity	▼***	▼***	▼***
South Korea	%Δ Quantity	▲***	▼***	▲***
Subject sources	%Δ Quantity	▲1.7	▼(25.1)	▲35.8
Japan	%Δ Quantity	▼***	▼***	▼***
All other sources	%Δ Quantity	▲***	▼***	▲***
Nonsubject sources	%Δ Quantity	▼***	▼***	▲***
All import sources	%Δ Quantity	▼***	▼***	▲***
France	%Δ Value	▲***	▼***	▲***
Mexico	%Δ Value	▼***	▼***	▲***
South Korea	%Δ Value	▲***	▼***	▲***
Subject sources	%Δ Value	▲8.5	▼(36.6)	▲71.1
Japan	%Δ Value	▼***	▼***	▼***
All other sources	%Δ Value	▲***	▼***	▲***
Nonsubject sources	%Δ Value	▼***	▼***	▲***
All import sources	%Δ Value	▼***	▼***	▲***
France	%Δ Unit value	▼***	▼***	▲***
Mexico	%Δ Unit value	▲***	▼***	▲***
South Korea	%Δ Unit value	▲***	▼***	▲***
Subject sources	%Δ Unit value	▲6.8	▼(15.3)	▲26.0
Japan	%Δ Unit value	▼***	▼***	▲***
All other sources	%Δ Unit value	▲***	▼***	▲***
Nonsubject sources	%Δ Unit value	▼***	▼***	▲***
All import sources	%Δ Unit value	▲***	▼***	▲***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Share of quantity is the share of U.S. imports by quantity; share of value is the share of U.S. imports by value; ratio are U.S. imports to production.

Figure IV-1
NBR: U.S. import quantities and average unit values, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. imports of NIBR, XNBR, and all other NBR

Table IV-3 presents data for U.S. imports from all sources of NIBR, XNBR, and all other NBR.[13] NIBR and XNBR each accounted for ***, by quantity, of total imports throughout the period for which data were collected. *** NIBR from 2019 to 2021 was imported from ***. During 2019-21, *** percent of XNBR imports came from subject sources (***) and *** percent came from nonsubject sources (imported by ***). AUVs of NIBR and XNBR imports were consistently higher than AUVs of all other NBR imports.

Table IV-3
NBR: U.S. imports from all sources, by type and by period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound

Product type	Measure	2019	2020	2021
NIBR	Quantity	***	***	***
XNBR	Quantity	***	***	***
All other NBR	Quantity	***	***	***
All NBR	Quantity	***	***	***
NIBR	Value	***	***	***
XNBR	Value	***	***	***
All other NBR	Value	***	***	***
All NBR	Value	***	***	***
NIBR	Unit Value	***	***	***
XNBR	Unit Value	***	***	***
All other NBR	Unit Value	***	***	***
All NBR	Unit Value	***	***	***
NIBR	Share of Quantity	***	***	***
XNBR	Share of Quantity	***	***	***
All other NBR	Share of Quantity	***	***	***
All NBR	Share of Quantity	100.0	100.0	100.0
NIBR	Share of Value	***	***	***
XNBR	Share of Value	***	***	***
All other NBR	Share of Value	***	***	***
All NBR	Share of Value	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[13] NIBR is “acrylonitrile-isoprene-butadiene rubber” and is produced by incorporating isoprene during the production (polymerization) process of NBR. XNBR is “carboxylated NBR” and is produced by incorporating methacrylic acid during the production (polymerization) process of NBR.

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[14] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[15] Imports from France accounted for *** percent, imports from Mexico accounted for *** percent, and imports from South Korea accounted for *** percent of total imports of NBR by quantity during June 2020 through May 2021.

Table IV-4
NBR: U.S. imports in the twelve-month period preceding the filing of the petitions, June 2020 through May 2021

Quantity in 1,000 pounds; share in percent

Source of imports	Quantity	Share of quantity
France	***	***
Mexico	***	***
South Korea	***	***
Subject sources	56,295	***
Japan	***	***
All other sources	***	***
Nonsubject sources	***	***
All sources	***	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[14] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[15] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Critical circumstances

On June 24, 2022, Commerce issued its final determination that "critical circumstances" exist with regard to imports from France of NBR produced and exported by all producers and exporters from France other than Arlanxeo France and from South Korea from LG Chem and the companies covered by the all-others rate.[16] [17] In these investigations, if both Commerce and the Commission make affirmative final critical circumstances determinations, certain subject imports may be subject to antidumping duties retroactive by 90 days from February 2, 2022, the effective date of Commerce's preliminary affirmative LTFV determination.[18] Tables IV-5 through IV-8 and figures IV-2 and IV-3 present this data.

Table IV-5
NBR: U.S. imports from France subject to Commerce's affirmative preliminary critical circumstances determination

Quantity in 1,000 pounds

Month	Relation to petition	Quantity
January 2021	Before	***
February 2021	Before	***
March 2021	Before	***
April 2021	Before	***
May 2021	Before	***
June 2021	Before	***
July 2021	After	***
August 2021	After	***
September 2021	After	***
October 2021	After	***
November 2021	After	***
December 2021	After	***

Table continued.

[16] 87 FR 37833, June 24, 2022 and 87 FR 37825, June 24, 2022, referenced in app. A. When petitioners file timely allegations of critical circumstances, Commerce examines whether there is a reasonable basis to believe or suspect that (1) either there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise, or the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV and that there was likely to be material injury by reason of such sales; and (2) there have been massive imports of the subject merchandise over a relatively short period.

[17] Commerce found that critical circumstances do not exist for Kumho Petrochemical Co., Ltd. 87 FR 37825, June 24, 2022.

[18] Zeon takes no position with respect to critical circumstances. Zeon's postconference brief, Responses to the Commissioners' Questions, p. 35

Table IV-5 Continued
NBR: U.S. imports from France potentially subject to Commerce's affirmative final critical circumstances determination

Quantity in 1,000 pounds

Comparison pre- and post-petition period	Cumulative before period quantity	Cumulative after period quantity	Difference in percent
1 month	***	***	***
2 months	***	***	***
3 months	***	***	***
4 months	***	***	***
5 months	***	***	***
6 months	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Figure IV-2
NBR: U.S. imports from France potentially subject to Commerce's final critical circumstances determination, January 2021 through December 2021

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-6
NBR: U.S. importers' U.S. inventories of imports from France for analysis in relation to Commerce's affirmative final critical circumstances determination, by date

Quantity in 1,000 pounds; index in percent

Date	Quantity	Index
June 30, 2021	***	100.0
July 31, 2021	***	***
August 31, 2021	***	***
September 30, 2021	***	***
October 31, 2021	***	***
November 30, 2021	***	***
December 31, 2021	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Index based on end-of-period inventories on June 30, 2021, equal to 100.0 percent.

Table IV-7
NBR: U.S. imports from South Korea subject to Commerce's affirmative final critical circumstances determination

Quantity in 1,000 pounds

Month	Relation to petition	Quantity
January 2021	Before	***
February 2021	Before	***
March 2021	Before	***
April 2021	Before	***
May 2021	Before	***
June 2021	Before	***
July 2021	After	***
August 2021	After	***
September 2021	After	***
October 2021	After	***
November 2021	After	***
December 2021	After	***

Table continued.

Table IV-7 Continued
NBR: U.S. imports from South Korea potentially subject to Commerce's affirmative final critical circumstances determination

Quantity in 1,000 pounds

Comparison pre- and post-petition period	Cumulative before period quantity	Cumulative after period quantity	Difference in percent
1 month	***	***	***
2 months	***	***	***
3 months	***	***	***
4 months	***	***	***
5 months	***	***	***
6 months	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-3
NBR: U.S. imports from South Korea potentially subject to Commerce's final critical circumstances determination, January 2021 through December 2021

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-8
NBR: U.S. importers' U.S. inventories of imports from South Korea for analysis in relation to Commerce's affirmative final critical circumstances determination, by date

Quantity in 1,000 pounds; index in percent

Date	Quantity	Index
June 30, 2021	***	100.0
July 31, 2021	***	***
August 31, 2021	***	***
September 30, 2021	***	***
October 31, 2021	***	***
November 30, 2021	***	***
December 31, 2021	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Index based on end-of-period inventories on June 30, 2021, equal to 100.0 percent.

Cumulation considerations

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility[19]

Table IV-9 and figure IV-4 present quantity and shares of U.S. producer Zeon's and U.S. importers' U.S. shipments by form: (1) bale/slab; (2) ground, particulate, pellet, or powder; and (3) liquid. As shown in table IV-9, NBR in bale/slab form represented the majority or all (in the case of imports from ***) of U.S. shipments for each source. U.S. shipments in ground, particulate, pellet, or powder form were reported from all sources except ***. Only *** reported U.S. shipments in liquid form.

Table IV-9
NBR: U.S. producer Zeon's and U.S. importers' U.S. shipments, by source and form, 2021

Quantity in 1,000 pounds

Source	Bale/slab	Ground	Liquid	All forms
U.S. producers	***	***	***	***
France	***	***	***	***
Mexico	***	***	***	***
South Korea	***	***	***	***
Subject sources	***	***	***	***
Japan	***	***	***	***
All other sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Table continued.

[19] Zeon estimates that the grades of NBR supplied by subject imports for which Zeon did not have an equivalent substitute grade which it produced in its Louisville factory since 2018 is roughly *** percent of the roughly *** metric tons of NBR rubber consumed in the U.S. market in 2021. Zeon's postconference brief, Responses to the Commissioners' Questions, p. 17

Table IV-9 Continued
NBR: U.S. producer Zeon's and U.S. importers' U.S. shipments, by source and form, 2021

Share across in percent

Source	Bale/slab	Ground	Liquid	All forms
U.S. producers	***	***	***	100.0
France	***	***	***	100.0
Mexico	***	***	***	100.0
South Korea	***	***	***	100.0
Subject sources	***	***	***	100.0
Japan	***	***	***	100.0
All other sources	***	***	***	100.0
Nonsubject sources	***	***	***	100.0
All import sources	***	***	***	100.0
All sources	***	***	***	100.0

Table continued.

Table IV-9 Continued
NBR: U.S. producer Zeon's and U.S. importers' U.S. shipments, by source and form, 2021

Share down in percent

Source	Bale/slab	Ground	Liquid	All forms
U.S. producers	***	***	***	***
France	***	***	***	***
Mexico	***	***	***	***
South Korea	***	***	***	***
Subject sources	***	***	***	***
Japan	***	***	***	***
All other sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.
Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Figure IV-4
NBR: U.S. shipments, by source and form

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-10 and figure IV-5 present shares of the U.S. producer Zeon's and U.S. importers' 2021 U.S. shipments by acrylonitrile ("ACN") content. As shown in table IV-10, U.S. shipments from *** had ACN content that were within all five ranges specified, while U.S. shipments from *** had ACN content ranges that were within four of the five ranges specified (all but ACN content greater than 41 percent). The ACN content range that represented the highest share of 2021 U.S. shipments for *** was equal to or greater than 31 percent and less than or equal to 35 percent. The ACN content ranges that represented the highest shares of *** were: (1) equal to or greater than 26 percent and less than 31 percent; and (2) greater than 35 percent and less than or equal to 41 percent.

Table IV-10
NBR: U.S. producer Zeon's and U.S. importers' U.S. shipments, by source and ACN content, 2021

Quantity in 1,000 pounds

Source	<26%	>=26% and <31%"	>=31% and <=35%	>35% and <=41%	>41%	All ACN contents
U.S. producers	***	***	***	***	***	***
France	***	***	***	***	***	***
Mexico	***	***	***	***	***	***
South Korea	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Japan	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
All sources	***	***	***	***	***	***

Table continued.

Table IV-10 Continued
NBR: U.S. producer Zeon's and U.S. importers' U.S. shipments, by source and ACN content, 2021

Share across in percent

Source	<26%	>=26% and <31%"	>=31% and <=35%	>35% and <=41%	>41%	All ACN contents
U.S. producers	***	***	***	***	***	100.0
France	***	***	***	***	***	100.0
Mexico	***	***	***	***	***	100.0
South Korea	***	***	***	***	***	100.0
Subject sources	***	***	***	***	***	100.0
Japan	***	***	***	***	***	100.0
All other sources	***	***	***	***	***	100.0
Nonsubject sources	***	***	***	***	***	100.0
All import sources	***	***	***	***	***	100.0
All sources	***	***	***	***	***	100.0

Table continued.

Table IV-10 Continued
NBR: U.S. producer Zeon's and U.S. importers' U.S. shipments, by source and ACN content, 2021

Share down in percent

Source	<26%	>=26% and <31%"	>=31% and <=35%	>35% and <=41%	>41%	All ACN contents
U.S. producers	***	***	***	***	***	***
France	***	***	***	***	***	***
Mexico	***	***	***	***	***	***
South Korea	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Japan	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
All sources	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Figure IV-5
NBR: U.S. shipments, by source and ACN content

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

*** reported U.S. shipments of NBR for which their customers require custom specifications and *** reported U.S. shipments of custom-produced grades that are only sold to one customer and not offered for sale to other customers.

***.

Geographical markets

Table IV-11 presents the quantity and shares of U.S. imports of NBR in 2021 by border of entry based on official import statistics. NBR imports entered through all four borders of entry by both subject and nonsubject sources. NBR imports from Mexico entered almost exclusively through ports located in the South, the majority of NBR imports from France and all other sources entered through ports located in the East, and the majority of NBR imports from Japan entered through ports located in the North.

Table IV-11
NBR: U.S. imports by source and border of entry, 2021

Quantity in 1,000 pounds

Source	East	North	South	West	All borders
France	24,727	323	8,875	-	33,924
Mexico	-	-	12,252	6	12,258
South Korea	13,222	8,927	379	10,891	33,419
Subject sources	37,949	9,250	21,506	10,897	79,601
Japan	393	13,837	4,514	1,143	19,887
All other sources	8,384	862	532	568	10,346
Nonsubject sources	8,777	14,699	5,046	1,711	30,233
All import sources	46,726	23,949	26,552	12,607	109,834

Table continued.

Table IV-11 Continued
NBR: U.S. imports by source and border of entry, 2021

Share across in percent

Source	East	North	South	West	All borders
France	72.9	1.0	26.2	-	100.0
Mexico	-	-	100.0	0.0	100.0
South Korea	39.6	26.7	1.1	32.6	100.0
Subject sources	47.7	11.6	27.0	13.7	100.0
Japan	2.0	69.6	22.7	5.7	100.0
All other sources	81.0	8.3	5.1	5.5	100.0
Nonsubject sources	29.0	48.6	16.7	5.7	100.0
All import sources	42.5	21.8	24.2	11.5	100.0

Table continued.

Table IV-11 Continued
NBR: U.S. imports by source and border of entry, 2021

Share down in percent

Source	East	North	South	West	All borders
France	52.9	1.3	33.4	-	30.9
Mexico	-	-	46.1	0.0	11.2
South Korea	28.3	37.3	1.4	86.4	30.4
Subject sources	81.2	38.6	81.0	86.4	72.5
Japan	0.8	57.8	17.0	9.1	18.1
All other sources	17.9	3.6	2.0	4.5	9.4
Nonsubject sources	18.8	61.4	19.0	13.6	27.5
All import sources	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 4002.59.0000, accessed May 9, 2022. Imports are based on the imports for consumption data series.

Presence in the market

Table IV-12 and figures IV-6 and IV-7 present monthly official U.S. import statistics for subject and nonsubject sources. U.S. imports of NBR from each source were present in every month from January 2019 to February 2022.

Table IV-12
NBR: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	France	Mexico	South Korea	Subject
2019	January	4,131	1,738	3,123	8,992
2019	February	1,315	1,931	1,875	5,120
2019	March	3,365	1,439	3,969	8,773
2019	April	2,763	1,018	2,368	6,149
2019	May	3,868	1,840	2,740	8,448
2019	June	1,988	1,449	3,014	6,451
2019	July	958	979	3,623	5,559
2019	August	2,023	856	1,786	4,665
2019	September	3,364	1,325	1,700	6,389
2019	October	1,954	1,881	1,976	5,810
2019	November	1,905	1,842	2,201	5,947
2019	December	2,568	1,354	1,775	5,697
2020	January	3,803	1,355	1,656	6,814
2020	February	1,222	1,090	2,158	4,470
2020	March	2,709	2,105	1,521	6,335
2020	April	3,461	1,353	2,696	7,510
2020	May	3,157	876	1,379	5,412
2020	June	1,048	942	1,596	3,586
2020	July	963	1,252	1,418	3,633
2020	August	1,050	1,061	1,552	3,663
2020	September	1,975	1,175	1,645	4,795
2020	October	1,380	765	1,723	3,868
2020	November	956	1,140	757	2,854
2020	December	3,457	1,199	1,235	5,890

Table continued.

Table IV-12 Continued
NBR: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	France	Mexico	South Korea	Subject
2021	January	3,076	1,580	1,352	6,007
2021	February	3,043	1,223	2,576	6,842
2021	March	2,918	783	4,160	7,860
2021	April	3,676	740	2,217	6,633
2021	May	2,336	1,153	2,788	6,277
2021	June	1,480	874	4,160	6,514
2021	July	2,337	1,062	2,536	5,935
2021	August	3,649	741	2,277	6,667
2021	September	4,023	1,007	4,078	9,107
2021	October	1,875	912	3,665	6,452
2021	November	2,986	1,286	2,994	7,266
2021	December	2,527	898	616	4,041
2022	January	3,507	674	1,139	5,320
2022	February	838	994	999	2,831
2022	March	949	880	798	2,627

Table continued.

Table IV-12 Continued
NBR: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	Japan	All other	Nonsubject sources	All import sources
2019	January	2,081	1,227	3,308	12,300
2019	February	1,814	1,746	3,560	8,680
2019	March	3,463	1,044	4,507	13,280
2019	April	4,271	2,530	6,801	12,950
2019	May	2,429	867	3,296	11,744
2019	June	2,102	572	2,674	9,125
2019	July	2,249	453	2,703	8,262
2019	August	2,031	707	2,738	7,403
2019	September	1,794	795	2,589	8,978
2019	October	1,788	476	2,264	8,075
2019	November	1,121	633	1,754	7,701
2019	December	1,641	338	1,979	7,676
2020	January	1,354	560	1,914	8,728
2020	February	2,524	271	2,795	7,265
2020	March	1,733	396	2,129	8,465
2020	April	3,498	501	3,999	11,509
2020	May	3,488	1,341	4,830	10,242
2020	June	1,662	726	2,388	5,974
2020	July	744	904	1,648	5,281
2020	August	1,727	263	1,989	5,652
2020	September	1,418	516	1,933	6,728
2020	October	442	341	783	4,652
2020	November	771	641	1,412	4,265
2020	December	1,087	1,199	1,235	5,890

Table continued.

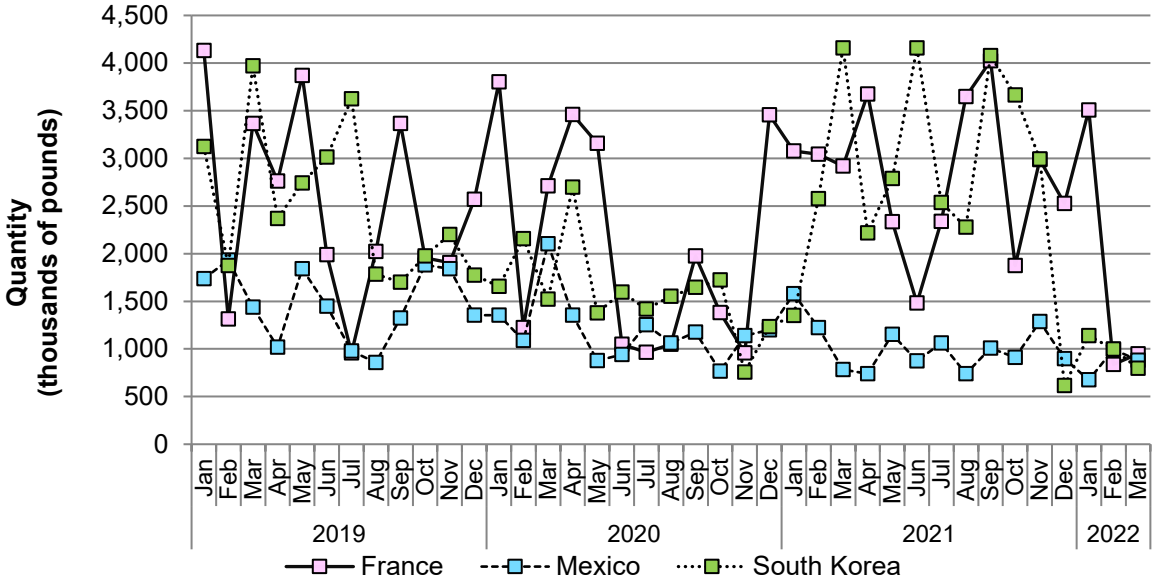
Table IV-12 Continued
NBR: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	Japan	All other	Nonsubject sources	All import sources
2021	January	1,089	219	1,308	7,315
2021	February	313	243	556	7,398
2021	March	1,053	352	1,406	9,266
2021	April	1,803	290	2,093	8,726
2021	May	1,696	992	2,688	8,965
2021	June	2,415	1,170	3,585	10,099
2021	July	2,177	739	2,916	8,851
2021	August	2,695	112	2,807	9,474
2021	September	1,389	1,745	3,134	12,241
2021	October	1,541	2,263	3,804	10,256
2021	November	1,680	701	2,381	9,647
2021	December	2,036	1,521	3,557	7,597
2022	January	319	588	194	1,880
2022	February	156	68	58	3,334
2022	March	206	20	193	2,341

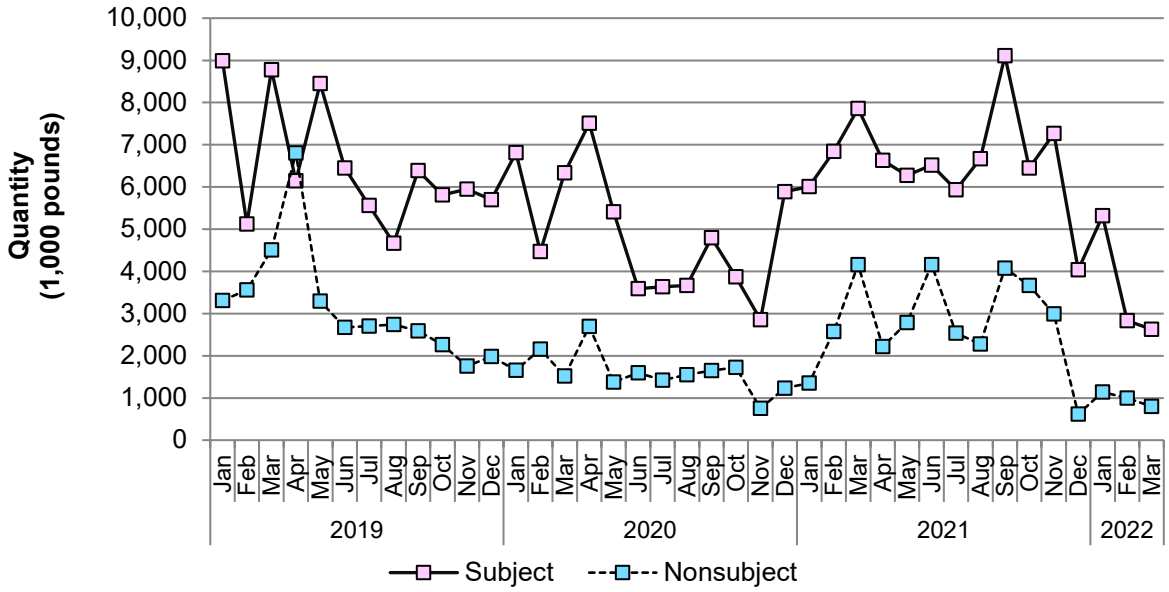
Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 4002.59.0000, accessed May 9, 2022. Imports are based on the imports for consumption data series.

Figure IV-6
NBR: U.S. imports from individual subject sources, by source and by month



Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 4002.59.0000, accessed May 9, 2022. Imports are based on the imports for consumption data series.

Figure IV-7
NBR: U.S. imports from aggregated subject and nonsubject sources, by month



Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 4002.59.0000, accessed May 9, 2022. Imports are based on the imports for consumption data series.

Apparent U.S. consumption and market shares

Quantity

Table IV-13 and figure IV-8 present data on apparent U.S. consumption and U.S. market shares by quantity for NBR. Apparent U.S. consumption quantity decreased during 2019-20 by 21.4 percent, then increased by 17.2 percent during 2020-21, for an overall 7.8 percent decrease during 2019-21. Subject imports accounted for almost two-thirds of the U.S. market during 2019-21 (between *** and *** percent, while nonsubject imports accounted for more than one-fourth of the market (between *** and *** percent). Lastly, the U.S. producer's U.S. shipments account for up to one-eighth of the market (between *** and *** percent).

U.S. shipment quantity increased and gained market share during 2019-21 for imports from France (quantity increased *** percent and gained *** percentage points of market share).

U.S. shipment quantities decreased but gained market share during 2019-21 for the following sources: U.S. producer Zeon (quantity decreased *** percent but gained *** percentage points of market share), South Korea (quantity decreased *** percent but gained *** percentage points in market share), nonsubject source Japan (quantity decreased *** percent but gained *** percentage points in market share), and total nonsubject sources (quantity decreased *** percent but gained *** percentage points in market share).

U.S. shipment quantities decreased and lost market share during 2019-21 for the following sources: total subject sources (quantity decreased *** percent and lost *** percentage points in market share), Mexico (quantity decreased *** percent and lost *** percentage points in market share), and all other sources (quantity decreased *** percent and lost *** percentage points in market share).

Table IV-13
NBR: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in 1,000 pounds; shares in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
France	Quantity	***	***	***
Mexico	Quantity	***	***	***
South Korea	Quantity	***	***	***
Subject	Quantity	68,994	53,199	61,642
Japan	Quantity	***	***	***
All other sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	110,392	86,802	101,744
U.S. producers	Share	***	***	***
France	Share	***	***	***
Mexico	Share	***	***	***
South Korea	Share	***	***	***
Subject	Share	62.5	61.3	60.6
Japan	Share	***	***	***
All other sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-8
NBR: Apparent U.S. consumption based on quantity, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Value

Table IV-14 and figure IV-9 present data on apparent U.S. consumption and U.S. market shares by value for NBR. Apparent U.S. consumption value decreased during 2019-20 by 28.8 percent, then increased during 2020-21 by 49.1 percent, for an overall increase during 2019-21 of 6.2 percent.

U.S. shipment values increased and gained market share during 2019-21 for the following sources: U.S. producer Zeon (value increased *** percent and gained *** percentage points in market share), France (value increased *** percent and gained *** percentage points in market share), and South Korea (value increased *** percent and gained *** percentage points in market share), and Japan (value increased *** percent and gained *** percentage points in market share).

U.S. shipment values increased but lost market share during 2019-21 for the following sources: total subject sources (value increased *** percent but lost *** percentage points in market share) and total nonsubject sources (value increased *** percent but lost *** percentage points in market share).

U.S. shipment values decreased and lost market share during 2019-21 for the following sources: Mexico (value decreased *** percent and lost *** percentage points in market share) and all other sources (value decreased *** percent and lost *** percentage points in market share).

Table IV-14
NBR: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2019	2020	2021
U.S. producers	Value	***	***	***
France	Value	***	***	***
Mexico	Value	***	***	***
South Korea	Value	***	***	***
Subject	Value	84,870	57,462	89,843
Japan	Value	***	***	***
All other sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
All sources	Value	155,405	110,700	165,054
U.S. producers	Share	***	***	***
France	Share	***	***	***
Mexico	Share	***	***	***
South Korea	Share	***	***	***
Subject	Share	54.6	51.9	54.4
Japan	Share	***	***	***
All other sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-9
NBR: Apparent U.S. consumption based on value, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Part V: Pricing data

Factors affecting prices

Raw material costs

Major raw materials for NBR include monomers acrylonitrile ("ACN") and 1,3-butadiene ("butadiene").[1] As stated by the petitioner, "Pricing of NBR most generally tracks with monomer cost. During the POI and continuing to today, Zeon Chemicals prices its NBR on a formula basis."[2] Respondent Negromex estimated that 75 percent of the cost of raw materials is attributable to acrylonitrile and butadiene.[3] A representative for petitioner Zeon stated that its monomer costs are "indexed to the public index at a 70/30 ratio of butadiene to acrylonitrile, and that tracks with … published information."[4] U.S. producer Zeon reported that its raw material costs as a share of COGS *** from *** percent in 2019 to *** percent in 2021. Acrylonitrile prices increased in the first half of 2019 reportedly due to unexpected outages and a force majeure in the global market but declined through mid-2020. Acrylonitrile prices increased through March 2021 due to supply chain issues and a mid-February 2021 winter storm that caused another force majeure by oil refiners in the U.S. Gulf region. Acrylonitrile prices decreased since that occurrence but have remained higher than most months since January 2019.[5] Butadiene prices generally decreased through mid-2020 due to declining automotive sector demand and early economic impacts of COVID-19, then increased through August 2021 because of increasing downstream demand and weather-related production outages. Though butadiene prices decreased through the end of 2021, they have increased every month in 2022 (figure V-1 and table V-1).[6]

[1] Petition, p. 9.
[2] Hearing transcript, p. 28 (Cail).
[3] Conference transcript, p. 114 (Quintero).
[4] Hearing transcript, p. 76 (Cail).
[5] "NBR Raw Materials: April 2022," Dynasol Group, submitted with foreign producer Negromex's questionnaire response.
[6] Ibid.

Figure V-1
Raw materials: Prices of *, monthly, January 2019-March 2022**

Price in cents per pound

* * * * * * *

Source: *** data provided by Respondent Negromex, April 25, 2022.

During the hearing, representatives of petitioner Zeon discussed its price setting methods, stating that "in most cases for NBR, customer prices are based on four components: the domestic market price; butadiene and acrylonitrile monomer index; conversion costs; and an ocean freight surcharge."[7] Though the ocean freight surcharge only is relevant for imports, the other three portions apply to sales of domestic product. Zeon reported that these conversion costs, which include "non-monomer raw materials, fixed costs, and profit margin," had decreased.[8] Petitioner stated that conversion costs change one to four times per year.[9]

[7] Hearing transcript, p. 36 (Dalton).
[8] Ibid.
[9] Hearing transcript, p. 83 (Cail).

Table V-1
Raw materials: Prices of *, cents per pound, monthly, by raw material, January 2019-March 2022**

Price in cents per pound

Year	Month	Acrylonitrile price	Butadiene price
2019	January	***	***
2019	February	***	***
2019	March	***	***
2019	April	***	***
2019	May	***	***
2019	June	***	***
2019	July	***	***
2019	August	***	***
2019	September	***	***
2019	October	***	***
2019	November	***	***
2019	December	***	***
2020	January	***	***
2020	February	***	***
2020	March	***	***
2020	April	***	***
2020	May	***	***
2020	June	***	***
2020	July	***	***
2020	August	***	***
2020	September	***	***
2020	October	***	***
2020	November	***	***
2020	December	***	***
2021	January	***	***
2021	February	***	***
2021	March	***	***
2021	April	***	***
2021	May	***	***
2021	June	***	***
2021	July	***	***
2021	August	***	***
2021	September	***	***
2021	October	***	***
2021	November	***	***
2021	December	***	***
2022	January	***	***
2022	February	***	***
2022	March	***	***

Source: *** data provided by Respondent Negromex, April 25, 2022.

Transportation costs to the U.S. market

Transportation costs for NBR shipped from subject countries to the United States averaged 6.4 percent of NBR customs value of imports from France, 2.6 from Mexico, and 12.5 percent from South Korea during 2021. These estimates were derived from official import data and represent the transportation and other charges on imports.[10]

U.S. inland transportation costs

U.S. producer Zeon reported that *** for transportation and 8 of 14 responding importers reported that their purchasers typically arrange for transportation. U.S. producer Zeon reported that their U.S. inland transportation costs were *** percent of total cost. The five responding importers estimating inland transportation costs reported that they ranged from 1 to 5 percent of total cost.

Pricing practices

Pricing methods

U.S. producer Zeon reported using ***. Importers *** reported setting prices using transaction-by-transaction negotiations, contracts, price lists, and other methods (table V-2).

Table V-2
NBR: U.S. producer's and importers' reported price setting methods

Count in number of firms reporting

Method	U.S. producer	U.S. importers
Transaction-by-transaction	***	10
Contract	***	6
Set price list	***	2
Other	***	4
Responding firms	1	13

Source: Compiled from data submitted in response to Commission questionnaires.

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

[10] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2021 and then dividing by the customs value based on the HTS statistical reporting number 4002.59.0000.

U.S. producer Zeon stated that the majority of its sales are made ***.[11] Importers reported selling slightly less than half of their 2021 NBR sales on the spot market, with most of the remainder sold via annual contracts (table V-3). Zeon's contracts typically ***. Three importers reported sales through annual contracts and two reported sales through long-term contracts. All four responding importers[12] indicated that their contracts are indexed to raw material indices and two of three reported that their annual contract prices cannot be renegotiated. Petitioner Zeon stated that some of its customers are given pricing on a monthly or quarterly basis, but others have agreements where pricing moves fully at Zeon's discretion.[13] Importer *** reported that contracts with its customers adjust prices on a quarterly basis based on the Platts index and freight cost changes.

Table V-3
NBR: U.S. producer's and importers' shares of U.S. commercial shipments by type of sale, 2021

Share in percent

Item	U.S. producer	Subject U.S. importers
Long-term contracts	***	***
Annual contract	***	***
Short-term contracts	***	***
Spot sales	***	***
Total	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Because of rounding, figures may not add to the totals shown.

[11] In the preliminary phase of these investigations, a representative for Zeon reported that the majority of its sales were made on the spot market, ***. Conference transcript, p. 75 (Cail).

[12] Importer *** did not report selling via annual contracts (***) but indicated its annual contracts index to raw material costs.

[13] Conference transcript, p. 76 (Cail).

Sales terms and discounts

U.S. producer Zeon typically quotes prices on *** and 6 of 11 importers typically quote prices on a delivered basis. Zeon reported *** discounts[14], and charges ***. Most importers (9 of 13) reported no discount policies. Four importers reported offering total volume discounts and one uses a quantity discount. Importer *** reported that it has *** but does not offer discounts to other customers.

Price leadership

Eight of 21 responding purchasers reported that there were no price leaders in the NBR market, while 10 reported that Zeon was a leader, 4 reported that Arlanxeo was a leader, and 1 each reported that INSA,[15] Intertex,[16] and Kumho were price leaders. Purchaser *** stated that Zeon is the firm that most frequently issues price changes and Arlanxeo is the largest supplier of NBR globally. Three purchasers indicated that pricing may be formula-based, which was noted as lending some transparency to price changes in the market. Purchaser *** noted distinctions in pricing leadership between Zeon,[17] Arlanxeo, and INSA. Purchaser *** reported Arlanxeo increased prices eight times in 2021 ahead of their competitors. Purchaser *** noted that Kumho leads by often having the lowest price, and *** reported that Intertex leads by having the lowest price.

[14] Zeon reported ***.

[15] INSA refers to INSA GPRO, a Chinese producer, and a joint venture between "GPRO Investment Holding Group (one of China Top 500 enterprises) and Dynasol Group (joint ventured by KUO Group in Mexico and REPSOL Group in Spain, one of the 10 largest synthetic rubber producers in the world)." Entry for INSA GPRO at LinkedIn.com, found at https://www.linkedin.com/company/insa-gpro-nanjing-synthetic-rubber, retrieved April 28, 2022.

[16] Intertex World Resources, Inc. describes itself as "a leading value-added distributor of synthetic rubber, carbon black, process oils and rubber chemicals." Intertexworld.com, found at http://www.intertexworld.com/index-2.html, retrieved April 28, 2022.

[17] According to this purchaser, Zeon "seem{s} to prime the pump when price increases are looming but not very transparent as to what the cost drivers are," Arlanxeo has "pricing {that} is based on a formula using raw material inputs, exchange rates, and energy surcharges so it's quite transparent and easy to understand. It goes up when these inputs go up and vice versa. They tend to increase and decrease as well but are more transparent as to what the input drivers are," and INSA "quote{s} us but are not formula based as Arlanxeo is and we do no current business with them as their product is suspect in our application."

Price data

The Commission requested the U.S. producer and importers to provide quarterly data for the total quantity and f.o.b. value of the following NBR products shipped to unrelated U.S. customers during January 2019-December 2021.

Product 1.--NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Product 2.--NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, ground/particulate/pellet form, sold in 20-30 kg bags.

Product 3.--NBR with Acrylonitrile content greater than or equal to 26% (exclusive) and less than or equal to 31% (exclusive) or Acrylonitrile content greater than 35% (exclusive) and less than or equal to 41% (exclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Product 4.--NBR with Acrylonitrile content less than 26% (inclusive) or Acrylonitrile content greater than 41% (inclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Product 5.--XNBR, any Acrylonitrile content, made from methacrylic acid, sold in bales or slabs ranging from 25-45 kgs.

U.S. producer Zeon and nine importers (***) provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[18] [19] Pricing data for nonsubject source Japan are presented in Appendix G. No importers reported pricing data for product 2 from South Korea or product 5 from Mexico, South Korea, or Japan. Pricing data reported by these firms accounted for *** percent of the U.S. producer's shipments of NBR, *** percent of U.S. shipments of subject imports from

[18] Per-unit pricing data are calculated from total quantity and total value data provided by the U.S. producer and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[19] ***.

France, *** percent of subject imports from Mexico, and *** subject imports from South Korea during 2021.[20] Price data for products 1-5 are presented in tables V-4 to V-8 and figures V-2 to V-6.

[20] Pricing coverage is based on U.S. shipments reported in questionnaires.

Table V-4
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	France price	France quantity	France margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***

Table continued.

Table V-4 Continued
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	Mexico price	Mexico quantity	Mexico margin	South Korea price	South Korea quantity	South Korea margin
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Table V-5
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	France price	France quantity	France margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***

Table continued.

Table V-5 Continued
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	Mexico price	Mexico quantity	Mexico margin	South Korea price	South Korea quantity	South Korea margin
2019 Q1	***	***	***	--	0	--
2019 Q2	***	***	***	--	0	--
2019 Q3	***	***	***	--	0	--
2019 Q4	***	***	***	--	0	--
2020 Q1	***	***	***	--	0	--
2020 Q2	***	***	***	--	0	--
2020 Q3	***	***	***	--	0	--
2020 Q4	***	***	***	--	0	--
2021 Q1	***	***	***	--	0	--
2021 Q2	***	***	***	--	0	--
2021 Q3	***	***	***	--	0	--
2021 Q4	***	***	***	--	0	--

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, ground/particulate/pellet form, sold in 20-30 kg bags.

Table V-6
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	France price	France quantity	France margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***

Table continued.

Table V-6 Continued
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	Mexico price	Mexico quantity	Mexico margin	South Korea price	South Korea quantity	South Korea margin
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: NBR with Acrylonitrile content greater than or equal to 26% (exclusive) and less than or equal to 31% (exclusive) or Acrylonitrile content greater than 35% (exclusive) and less than or equal to 41% (exclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Table V-7
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	France price	France quantity	France margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***

Table continued.

Table V-7 Continued
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	Mexico price	Mexico quantity	Mexico margin	South Korea price	South Korea quantity	South Korea margin
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: NBR with Acrylonitrile content less than 26% (inclusive) or Acrylonitrile content greater than 41% (inclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Table V-8
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	France price	France quantity	France margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 5: XNBR, any Acrylonitrile content, made from methacrylic acid, sold in bales or slabs ranging from 25-45 kgs.

Figure V-2
NBR: Weighted-average prices and quantities of domestic and imported product 1, by quarter
Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Figure V-3
NBR: Weighted-average prices and quantities of domestic and imported product 2, by quarter
Price of product 2

* * * * * * *

Volume of product 2

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, ground/particulate/pellet form, sold in 20-30 kg bags.

Figure V-4
NBR: Weighted-average prices and quantities of domestic and imported product 3, by quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: NBR with Acrylonitrile content greater than or equal to 26% (exclusive) and less than or equal to 31% (exclusive) or Acrylonitrile content greater than 35% (exclusive) and less than or equal to 41% (exclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Figure V-5
NBR: Weighted-average prices and quantities of domestic and imported product 4, by quarter
Price of product 4

* * * * * * *

Volume of product 4

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: Specialty NBR with Acrylonitrile content less than 26% or greater than 41%; Hot Polymerized, and/or containing methacrylic acid, ground/particulate/pellet form, sold in 20-30 kg bags.

Figure V-6
NBR: Weighted-average prices and quantities of domestic and imported product 5, by quarter
Price of product 5

* * * * * * *

Volume of product 5

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 5: XNBR, any Acrylonitrile content, made from methacrylic acid, sold in bales or slabs ranging from 25-45 kgs.

Price trends

In general, prices increased considerably during January 2019-December 2021. Table V-9 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from *** percent to *** percent while import price increases ranged from *** percent to *** percent. The price increases from any source were highest for products 1 and 3, the highest-volume import products.[21] Minimum price increases were at least *** percent for these products.

Table V-9
NBR: Summary of price data, by product and source

Volume in 1,000 pounds, price in dollars per pound

Product	Source	Number of quarters	Quantity	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	12	***	***	***	***	***	***
Product 1	France	12	***	***	***	***	***	***
Product 1	Mexico	12	***	***	***	***	***	***
Product 1	South Korea	12	***	***	***	***	***	***
Product 2	United States	12	***	***	***	***	***	***
Product 2	France	12	***	***	***	***	***	***
Product 2	Mexico	12	***	***	***	***	***	***
Product 2	South Korea	0	---	---	---	---	---	---
Product 3	United States	12	***	***	***	***	***	***
Product 3	France	12	***	***	***	***	***	***
Product 3	Mexico	12	***	***	***	***	***	***
Product 3	South Korea	12	***	***	***	***	***	***
Product 4	United States	12	***	***	***	***	***	***
Product 4	France	12	***	***	***	***	***	***
Product 4	Mexico	12	***	***	***	***	***	***
Product 4	South Korea	12	***	***	***	***	***	***
Product 5	United States	12	***	***	***	***	***	***
Product 5	France	12	***	***	***	***	***	***
Product 5	Mexico	0	---	---	---	---	---	---
Product 5	South Korea	0	---	---	---	---	---	---

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Percent change column is percentage change from the first quarter 2019 to the last quarter of 2021.

[21] These were also the highest-volume (product 3) and lowest-volume (product 1) domestic products.

Price comparisons

As shown in tables V-10 and V-11, prices for product imported from subject sources were below those for U.S.-produced product in 131 of 144 instances (*** pounds); margins of underselling ranged from 0.9 percent to 67.3 percent. In the remaining 13 instances (*** pounds), prices for product from France and Mexico were between 3.0 percent and 31.0 percent above prices for the domestic product. As shown in table V-12, average underselling margins were highest in 2020 (42.7, 36.5, and 54.9 percent for France, Mexico, and South Korea, respectively).

Table V-10

NBR: Instances of underselling and the range and average of margins, by source
Quantity in 1,000 pounds; margin in percent

Item	Number of quarters	Quantity	Average margin	Minimum margin	Maximum margin
France, Product 1	12	***	***	***	***
France, Product 2	1	***	***	***	***
France, Product 3	12	***	***	***	***
France, Product 4	12	***	***	***	***
France, Product 5	12	***	***	***	***
Total, France	49	***	***	***	***
Mexico, Product 1	12	***	***	***	***
Mexico, Product 2	10	***	***	***	***
Mexico, Product 3	12	***	***	***	***
Mexico, Product 4	12	***	***	***	***
Mexico, Product 5	0	---	---	---	---
Total, Mexico	46	***	***	***	***
South Korea, Product 1	12	***	***	***	***
South Korea, Product 2	0	---	---	---	---
South Korea, Product 3	12	***	***	***	***
South Korea, Product 4	12	***	***	***	***
South Korea, Product 5	0	---	---	---	---
Total, South Korea	36	***	***	***	***
Total, Product 1	36	***	***	***	***
Total, Product 2	11	***	***	***	***
Total, Product 3	36	***	***	***	***
Total, Product 4	36	***	***	***	***
Total, Product 5	12	***	***	***	***
Total, all products and sources	131	158,648	34.6	0.9	67.3

Source**:** Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Table V-11
NBR: Instances of overselling and the range and average of margins, by source

Quantity in 1,000 pounds; margin in percent

Item	Number of quarters	Quantity	Average margin	Minimum margin	Maximum margin
France, Product 1	0	***	***	***	***
France, Product 2	11	***	***	***	***
France, Product 3	0	***	***	***	***
France, Product 4	0	***	***	***	***
France, Product 5	0	***	***	***	***
Total, France	11	***	***	***	***
Mexico, Product 1	0	***	***	***	***
Mexico, Product 2	2	***	***	***	***
Mexico, Product 3	0	***	***	***	***
Mexico, Product 4	0	***	***	***	***
Mexico, Product 5	0	***	***	***	***
Total, Mexico	2	***	***	***	***
South Korea, Product 1	0	***	***	***	***
South Korea, Product 2	0	***	***	***	***
South Korea, Product 3	0	***	***	***	***
South Korea, Product 4	0	***	***	***	***
South Korea, Product 5	0	***	***	***	***
Total, South Korea	0	***	***	***	***
Total, Product 1	0	***	***	***	***
Total, Product 2	13	***	***	***	***
Total, Product 3	0	***	***	***	***
Total, Product 4	0	***	***	***	***
Total, Product 5	0	***	***	***	***
Total, all products and sources	13	2,551	(14.7)	(3.0)	(31.0)

Source**:** Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Table V-12
NBR: Average margin of underselling, by source and year

Margin in percent

Year	France	Mexico	South Korea
2019	***	***	***
2020	***	***	***
2021	***	***	***

Source**:** Compiled from data submitted in response to Commission questionnaires.

Conversion costs

As noted earlier, producer Zeon's sales prices include raw material costs as well as conversion costs, and conversion costs vary between one and four times per year.[22] These conversion costs are related to contract pricing, as spot prices are "just a price" as a representative from Zeon noted at the hearing.[23] Commissioners asked how the conversion costs changed over the period 2019-21. In its posthearing brief, Zeon presented quarterly data showing average conversion costs based on differing ACN content of NBR (table V-13). The lowest average conversion cost - $*** per pound - was for the central ACN percentage (≥31 and ≤35) products and highest - $*** per pound - for the highest ACN products. As shown in the last row of table V-13, products with higher ACN content displayed less conversion cost variability that those with lower ACN content (i.e., the difference between the highest price and the lowest price). High and low prices did not consistently appear across all product types, but the lowest conversion cost occurred for two products in the first quarter of 2019 and the highest conversion cost occurred for two products in the last quarter of 2021, leading to the overall average quarterly conversion cost being lowest in the first quarter of the period of investigation and the highest occurring in the last quarter. The second- and third-lowest conversion costs, however, appeared in the second and third quarter of 2021. This is due to average conversion costs generally increasing from the first quarter of 2019 to the second quarter of 2020, then decreasing until the second quarter of 2021 before increasing in the third and fourth quarters of 2021.[24]

[22] Hearing transcript, p. 83 (Cail).

[23] Ibid, p. 84.

[24] The petitioner stated that this data "does not fully capture the trend of conversion price erosion because it does not allow for an apples-to-apples comparison of conversion price across the POI for the same grade of NBR. There are significant differences in conversion price charged based on the customer and NBR grad supplied in a given quarter." Petitioner also described some reasons for differences among the trends and levels in the conversion costs for each of the five ACN levels. Petitioner's posthearing brief, Exhs. I-13 - I-18.

Table V-13
NBR: Zeon's conversion cost, by product ACN percentage, quarterly, January 2019-December 2021

Conversion cost in dollars per pound of NBR; H and L signify high and low quarter for each product

Period	ACN % ≤26	ACN % >26 and <31	ACN % ≥31 and ≤35	ACN % >35 and <41	ACN % ≥41	All NBR
2019 Q1	*** L	*** L	***	***	***	*** L
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	*** H	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	*** H	***	***	***	*** H	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	*** L	***	***
2021 Q1	***	*** H	***	***	*** L	***
2021 Q2	***	***	*** L	***	***	***
2021 Q3	***	***	***	***	***	***
2021 Q4	***	***	*** H	***	*** H	*** H
Average	***	***	***	***	***	***
High - low difference	***	***	***	***	***	***

Source: Petitioner's posthearing brief, exh. I-13.

Lost sales and lost revenue

U.S. producer Zeon reported that it had to ***. During the preliminary phase of these investigations, Zeon identified *** firms with which they lost sales or revenue (*** consisting of lost sales allegations, *** consisting of lost revenue allegations, and *** consisting of both types of allegations). *** allegations included France, *** allegations included South Korea, and *** included Mexico. Respondents Dynasol and Kumho responded to each of the allegations in their prehearing briefs.[25]

Staff contacted *** purchasers and received responses from 38 purchasers. Responding purchasers reported purchasing 200.6 million pounds of NBR and importing 6.2 million pounds of NBR during 2019-21 (table V-14). Overall, their purchases/imports decreased from 68.0 million pounds in 2019 to 60.0 million pounds in 2020 before increasing to 78.9 million pounds in 2021.

[25] Respondent Negromex's prehearing brief, exh. 4 and respondent Kumho's prehearing brief, pp. 41-47.

During 2021, responding purchasers sourced *** percent of their purchases and imports from the U.S. producer, *** percent from France, *** percent from Mexico, and *** percent from South Korea; *** percent were from nonsubject countries. Japan accounted for more than almost 60 percent of nonsubject purchases/imports reported by purchasers. The largest changes in sourcing during 2019-21 were attributable to Mexico, which decreased by 9.7 percentage points, and South Korea, which increased by 7.5 percentage points.[26] As a result, combined subject import source share fell slightly from 73.9 percent in 2019 to 72.2 percent in 2021.

Purchasers were asked about changes in their purchasing patterns from different sources since 2019. Of the responding purchasers, six reported decreasing purchases from the domestic producer, five reported fluctuating purchases, six reported constant purchases, and four reported increasing purchases.[27] Explanations for decreasing purchases of domestic product included three purchasers that reported decreased downstream demand requirements, one that reported availability issues, one that reported quality issues, and one that reported that Zeon was promoting its NBR imported from Japan, and that the firm would buy domestic product when product from Japan was unavailable. Among those purchasers reporting fluctuating demand, two reported changing customer requirements, one reported that COVID-19 impacted their purchases and were put on allocation due to shortages or forces majeure, one reported a decrease in 2020 due to the pandemic and an increase in worldwide demand in 2021, and one reported that availability caused the fluctuations. Explanations for increasing purchases of domestic product included that it was the only source for a certain type of NBR and that one firm was starting to buy U.S. product to stabilize its supply.

[26] Purchaser *** reported that after it received notice of LG Chem's expected shutdown of South Korean NBR operations at the end of 2021, it "made large last-buy from LG Chem." Its purchases of product from South Korea in 2021 increased by *** compared with 2019. Its purchase changes from other sources over this period were much smaller: it also increased purchases from Mexico by ***, and decreased its purchases from domestic producers by *** and from France by ***. The difference between its purchases from South Korea in 2021 accounts for the majority of the *** increase in all purchases and imports from South Korea between 2019 and 2021 and is greater than the increase from all subject countries combined (7.1 million pounds).

[27] No purchasers reported that they did not know the source of the NBR that they purchased.

Table V-14
NBR: Purchasers' reported purchases and imports, by firm, 2019-21

Quantity in 1,000 pounds, change in share in percentage points

Firm	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject share
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***

Table continued.

Table V-14 Continued
NBR: Purchasers' reported purchases and imports, by firm, 2019-21

Quantity in 1,000 pounds, change in share in percentage points

Firm	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject share
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: All other includes all other sources and unknown sources. Change is the percentage point change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

Of the 37 responding purchasers, 22 reported that they had purchased imported NBR from France, Mexico, and/or South Korea instead of U.S.-produced product (16 from France, 11 from Mexico, and 10 from South Korea). Thirteen of these purchasers reported that subject import prices were lower than U.S.-produced product (7 for product from France, 4 for product from Mexico, and 8 for product from South Korea). Three of these 12 indicated that price was a primary reason for purchasing product from subject countries rather than U.S.-produced product – one from each subject country (table V-16). These purchases totaled *** million pounds of NBR, with the majority (***) attributable to imports from South Korea (table V-16).[28] Purchasers most frequently noted that the product that they purchased was only available from import sources; other reasons identified by purchasers include availability, customer specifications, domestic producers not selling through distributors, historical supply relationship, reliability, quality issues, technical criteria, and the diversification of supply as non-price reasons for purchasing imported rather than U.S.-produced product.

None of the 16 responding purchasers reported that the U.S. producer had reduced prices in order to compete with lower-priced imports from France, Mexico, and/or South Korea.

[28] ***. Petitioner Zeon believes that the *** accurately reflects sales that Zeon lost. Petitioner's posthearing brief, exh. I, pp. 7-9. In this discussion, Petitioner also alleges further lost sales and lost revenues in 2021. Ibid, exh. I-10.

Table V-15
NBR: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in 1,000 pounds

Firm	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Explanation
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***

Table continued.

Table V-15 Continued
NBR: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in 1,000 pounds

Firm	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Explanation
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***

Table continued.

Table V-15 Continued
NBR: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in 1,000 pounds

Firm	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Explanation
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	Yes--22; No--15	Yes--13; No--8	Yes--3; No--19	2,289	NA

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-16
NBR: Purchasers' responses to purchasing subject imports instead of domestic product, by country

Quantity in 1,000 pounds

Source	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity
France	16	7	1	670
Mexico	11	4	1	40
South Korea	10	8	1	1,579
Subject sources	22	13	3	2,289

Source: Compiled from data submitted in response to Commission questionnaires.

Part VI: Financial experience of the U.S. producer

Background[1]

The sole U.S. producer, Zeon, provided usable financial results on its NBR operations. These data are believed to account for all U.S. production of NBR during the period examined. Zeon's financial results were reported on a calendar-year and GAAP basis.

Staff verified the results of Zeon with its corporate records. The verification adjustments were incorporated into this report. Zeon's U.S. producer questionnaire response was changed to revise ***.[2]

Operations on NBR

Table VI-1 presents data on the U.S. producer's operations in relation to NBR, while table VI-2 presents corresponding changes in AUVs.

[1] The following abbreviations may be used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), fiscal year ("FY"), net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development expenses ("R&D expenses"), and return on assets ("ROA").

[2] Staff verification report, Zeon, June 16, 2022.

Table VI-1
NBR: Results of operations of U.S. producer Zeon, by item and period

Quantity in 1,000 pounds; value in 1,000 dollars; ratios and shares in percent

Item	Measure	2019	2020	2021
Commercial sales	Quantity	***	***	***
Internal consumption	Quantity	***	***	***
Total net sales	Quantity	***	***	***
Commercial sales	Value	***	***	***
Internal consumption	Value	***	***	***
Total net sales	Value	***	***	***
COGS: Raw materials	Value	***	***	***
COGS: Direct labor	Value	***	***	***
COGS: Other factory	Value	***	***	***
COGS: Total	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
Interest expense	Value	***	***	***
All other expenses	Value	***	***	***
All other income	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation/amortization	Value	***	***	***
Cash flow	Value	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***
COGS: Other factory	Ratio to NS	***	***	***
COGS: Total	Ratio to NS	***	***	***
Gross profit	Ratio to NS	***	***	***
SG&A expense	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***
COGS: Raw materials	Share of COGS	***	***	***
COGS: Direct labor	Share of COGS	***	***	***
COGS: Other factory	Share of COGS	***	***	***
COGS: Total	Share of COGS	***	***	***

Table continued.

Table VI-1 Continued
NBR: Results of operations of U.S. producer Zeon, by item and period

Unit values in dollars per pound; count in number of firms reporting

Item	Measure	2019	2020	2021
Commercial sales	Unit value	***	***	***
Internal consumption	Unit value	***	***	***
Total net sales	Unit value	***	***	***
COGS: Raw materials	Unit value	***	***	***
COGS: Direct labor	Unit value	***	***	***
COGS: Other factory	Unit value	***	***	***
COGS: Total	Unit value	***	***	***
Gross profit or (loss)	Unit value	***	***	***
SG&A expenses	Unit value	***	***	***
Operating income or (loss)	Unit value	***	***	***
Net income or (loss)	Unit value	***	***	***
Operating losses	Count	***	***	***
Net losses	Count	***	***	***
Data	Count	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares represent the share of COGS.

Table VI-2
NBR: Changes in AUVs between comparison periods

Changes in percent

Item	2019-21	2019-20	2020-21
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory	***	***	***
COGS: Total	***	***	***

Table continued.

Table VI-2 Continued
NBR: Changes in AUVs between comparison periods

Changes in dollars per pound

Item	2019-21	2019-20	2020-21
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory	***	***	***
COGS: Total	***	***	***
Gross profit or (loss)	***	***	***
SG&A expense	***	***	***
Operating income or (loss)	***	***	***
Net income or (loss)	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Net sales

Zeon's net sales were comprised of ***. The company reported that ***.[3] [4]

The company's net sales, by both quantity and value, decreased from 2019 to 2020 and then increased from 2020 to 2021, resulting in an overall net increase between 2019 and 2021. The net sales AUV for NBR decreased from $*** in 2019 to $*** in 2020 and increased to $*** in 2021.[5]

[3] Emails from ***.

[4] Email from ***.

[5] The trends in Zeon's total net sales generally reflect the trends in its ***. The company's ***. The majority of Zeon's ***. Emails from ***.

Cost of goods sold and gross profit or loss

Zeon's raw material costs represented the largest share of the company's COGS in 2019 and 2021, and the second-largest share in 2020. As a ratio to net sales and on a per-pound basis, raw material costs decreased from 2019 to 2020 and increased in 2021, but remained below the 2019 cost.[6]

Table VI-3 presents Zeon's raw materials, by type. As seen in the table, butadiene and acrylonitrile represent ***. The unit values represent the input's cost for each pound of NBR produced rather than the acquisition cost, so the relative amounts needed to produce NBR will affect their unit values. Zeon reported that its ***.[7]

[6] Zeon adjusts its major monomer input to a moving average at the beginning of each month. Any changes in the moving average price of the monomer inputs result in a finished goods ("FG") inventory revaluation adjustment (either an increase or decrease), which is offset in COGS. Hearing transcript, p. 37 (Dalton). Similarly, the company ***. Staff verification report, Zeon, June 16, 2022, pp. 9-10 fn.11. During the period examined, ***. Staff verification report, Zeon, June 16, 2022, p. 13 fn.13. From Zeon's perspective, ***. *See* Staff verification report, Zeon, June 16, 2022, pp. 14-15.

***. Staff verification report, Zeon, June 16, 2022, p. 14.

[7] Zeon's U.S. producer questionnaire, section III-9c.

Table VI-3
NBR: Raw material costs in 2021, by type

Value in 1,000 dollars; unit values in dollars per pound; share of value in percent

Item	Value	Unit value	Share of value
Butadiene	***	***	***
Acrylonitrile	***	***	***
Other material inputs	***	***	***
Total raw materials	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Zeon's direct labor, which was the smallest component of COGS, increased each year from 2019 to 2021. The company reported that the increase in direct labor from 2019 to 2020 was largely the result of ***.[8] It also reported that its 2020 and 2021 labor costs increased ***.[9] ***.[10] On a per-pound basis, direct labor costs increased from 2019 to 2020 and decreased in 2021, but remained above the 2019 per-pound cost.

The last component of COGS, other factory costs, was the second largest component in 2019 and 2021, and the largest component in 2020. On an actual basis, other factory costs increased each year from 2019 to 2021. The company reported that the increase in other factory costs on an actual basis between 2019 and 2020 was the result of ***.[11] The increase in other factory costs between 2020 and 2021 on an actual basis was the result of ***.[12] On a per-pound basis, the company's other factory costs increased from 2019 to 2020 and decreased in 2021, but remained higher than the 2019 per-pound cost.

[8] Email from ***.
[9] Zeon's U.S. producers' questionnaire response, section III-18. Zeon reported that it ***. Ibid.
[10] Email from ***.
[11] The company does not ***. Email from ***. In order to include the ***. Email from ***.
[12] Email from ***.

Changes in the company's net sales volumes were the largest factor in the changes to the company's other factory cost AUVs.[13]

The company's COGS to net sales ratio increased from *** percent in 2019 to *** percent in 2020 and then decreased to *** percent in 2021. This resulted in the company's gross profit decreasing from $*** in 2019 to *** in 2020, before improving to *** in 2021.[14]

SG&A expenses and operating income or loss

As seen in table VI-1, Zeon's SG&A expenses decreased irregularly from 2019 to 2021. As a ratio to net sales, they fluctuated within a relatively narrow range, increasing from *** percent in 2019 to *** percent in 2020 and decreasing to *** percent in 2021. The company's operating income from NBR had similar trends as gross profit. It worsened from 2019 to 2020 and improved in 2021, with the company experiencing ***.[15] [16]

[13] Other factory costs include both variable and fixed costs, so a change in the net sales volume will affect the other factory cost AUV by spreading the fixed costs between a smaller or larger volume of goods.

[14] Without the FG inventory revaluation adjustments, the company's gross profit would have been ***. Staff verification report, Zeon, June 16, 2022, p. 14 fn.16. In its posthearing brief, petitioners also presented Zeon's financial results excluding these FG inventory revaluation adjustments. Petitioner's posthearing brief, p. 15. Staff notes that there were a few very minor rounding differences between the adjusted profitability values reported in petitioner's posthearing brief (which appear to be based on the rounded values that are required in the U.S. producers' questionnaire) and what was calculated by staff during verification.

[15] Without the FG inventory revaluation adjustments, the company's operating income would have been ***. Staff verification report, Zeon, June 16, 2022, p. 14 fn.16.

[16] The U.S. producer questionnaire asked companies to describe any effect the COVID-19 pandemic has had on their overall financial performance. Zeon reported: ***. Zeon's U.S. producer questionnaire, section III-18.

All other expenses and net income or loss

Classified below operating income are interest expense, other expenses, and other income. Zeon reported ***. The company reported this ***.[17] In 2019, the net amount of post-operating income items was ***. Overall, net income worsened from 2019 to 2020, but improved in 2021.[18] [19]

Capital expenditures, R&D expenses, assets, and operating ROA

Table VI-4 presents data on Zeon's capital expenditures, R&D expenses, assets, and its operating ROA from its NBR operations.[20] Table VI-5 presents the firm's narrative descriptions of the nature, focus, and significance of its capital expenditures, R&D expenses, its major asset categories, and any significant changes in asset levels over time. The company's capital expenditures increased in 2020 and decreased in 2021. R&D expenses decreased in 2020 and increased in 2021. However, both capital expenditures and R&D expenses were lower in 2021 than in 2019.

The company's reported assets associated with NBR decreased irregularly from 2019 to 2021, whereas the company's operating ROA increased irregularly.

[17] Email from ***.

[18] Without the FG inventory revaluation adjustments, the company's net income would have been ***. Staff verification report, Zeon, June 16, 2022, p. 14 fn.16.

[19] A variance analysis is not shown due to the ***.

[20] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value on a product-specific basis.

Table VI-4
NBR: U.S. producer Zeon's capital expenditures, R&D expenses, assets, and operating ROA, by period

Value in 1,000 dollars; ratios in percent

Item	Measure	2019	2020	2021
Capital expenditures	Value	***	***	***
R&D expenses	Value	***	***	***
Net assets	Value	***	***	***
Operating ROA	Ratio	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-5
NBR: Narrative descriptions of capital expenditures, R&D expenses, and total assets

Item	Narrative
Capital expenditures	***
R&D expenses	***
Net assets	***

Source: Compiled from data submitted in response to Commission questionnaires.

Capital and investment

The Commission requested the U.S. producer of NBR to describe any actual or potential negative effects of imports of NBR from France, Korea, and Mexico on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-6 presents the categories for which Zeon reported an impact and table VI-7 provides the corresponding narrative responses.

Table VI-6
NBR: Count of firms indicating actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2019, by effect

Effects as reported by Zeon

Effect	Category	Count
Cancellation, postponement, or rejection of expansion projects	Investment	***
Denial or rejection of investment proposal	Investment	***
Reduction in the size of capital investments	Investment	***
Return on specific investments negatively impacted	Investment	***
Other investment effects	Investment	***
Rejection of bank loans	Growth	***
Lowering of credit rating	Growth	***
Problem related to the issue of stocks or bonds	Growth	***
Ability to service debt	Growth	***
Other growth and development effects	Growth	***
Anticipated negative effects of imports	Future	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-7
NBR: Narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2019

Item	Firm name and narrative on impact of imports
***	***
***	***
***	***

Item	Firm name and narrative on impact of imports
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part VII: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

The industry in France

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce and/or export NBR from France.[3] Usable responses to the Commission's questionnaire were received from these two firms: Arlanxeo Emulsion Rubber France SAS ("Arlanxeo France") and OMNOVA Solutions SAS ("OMNOVA France"). These firms' exports to the United States accounted for *** U.S. imports of NBR from France in 2021.[4] According to estimates requested of the responding producers in France, the production of NBR in France reported in questionnaires accounts for approximately *** percent of overall production of NBR in France.[5] Table VII-1 presents information on the NBR operations of the responding producers and exporters in France.

Table VII-1
NBR: Summary data for producers in France, 2021

Quantity in 1,000 pounds; share in percent

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
Arlanxeo France	***	***	***	***	***	***
OMNOVA France	***	***	***	***	***	***
All firms	***	100.0	***	100.0	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[3] These firms were identified through a review of information submitted in the petitions and presented in third-party sources.

[4] Exports from France accounted for *** percent of U.S. imports from France in 2021, as reported in questionnaire responses. The difference between the import and export quantities is likely due to timing differences and recordkeeping.

[5] ***.

Changes in operations

As presented in table VII-2, *** reported shutdowns and curtailments *** and *** reported an acquisition since January 1, 2019.

Table VII-2
NBR: Reported changes in operations in France since January 1, 2019, by firm

Item	Firm name and accompanying narrative response
Acquisitions	***
Prolonged shutdowns or curtailments	***
Prolonged shutdowns or curtailments	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on NBR

Table VII-3 presents information on the NBR operations of the responding producers and exporters in France. Capacity decreased during 2019-21 by *** percent and is projected to not change in 2022 and 2023.[6] NBR production in France decreased during 2019-20 by *** percent, then increased by *** percent during 2020-21, for an overall *** percent increase during 2019-21, and is projected to increase from 2021 to 2023 by *** percent.[7] Decreased capacity and increased production resulted in a *** percentage point increase in capacity utilization during 2019-21.

[6] ***.
[7] ***.

Exports to all other markets than the United States accounted for approximately *** of total shipments,[8] while exports to the United States accounted for between *** (in 2020) and *** percent (in 2021) of total shipments during 2019-21. Home market shipments accounted for less than *** percent of total shipments throughout the period for which data were collected.

Exports to the United States increased by *** percent during 2019-21,[9] while exports to all other markets decreased by *** percent, during 2019-21. Correspondingly, exports to the United States as a share of total shipments increased by *** percentage points during 2019-21.

End-of-period inventories decreased by *** percent during 2019-21 but are projected to increase by *** percent during 2021-22 and by *** percent during 2021-23. Given that inventories decreased by a greater percentage than total shipments during 2019-21, the ratio of inventories to total shipments decreased from *** percent in 2019 to *** percent in 2021.

The COVID-19 pandemic ***.

[8] All other export markets include ***.

[9] Exports to the United States are projected to decrease by *** percent during 2021-22 and by *** percent during 2021-23. This decrease is driven by ***.

Table VII-3
NBR: Data on industry in France, by period

Quantity in 1,000 pounds

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Internal consumption	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Home market shipments	***	***	***	***	***
Exports to the United States	***	***	***	***	***
Exports to all other markets	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***

Table continued.

Table VII-3 Continued
NBR: Data on industry in France, by period

Ratio and share in percent

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity utilization ratio	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***
Internal consumption share	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***
Home market shipments share	***	***	***	***	***
Exports to the United States share	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***
Export shipments share	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Table VII-4 presents NBR production in France by type (NIBR, XNBR, and all other NBR).[10] *** from France produces XNBR, while *** NIBR.

Table VII-4
NBR: Production in France, by product type and period

Quantity in 1,000 pounds; shares in percent

Item	Measure	2019	2020	2021
NIBR	Quantity	***	***	***
XNBR	Quantity	***	***	***
All other NBR	Quantity	***	***	***
All NBR	Quantity	***	***	***
NIBR	Share	***	***	***
XNBR	Share	***	***	***
All other NBR	Share	***	***	***
All NBR	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table VII-5 presents data regarding continuous vs. batch production methods used to produce NBR in France in 2021.[11] *** reported using both methods to produce NBR, the *** is produced using the continuous method.

Table VII-5
NBR: Production in France, by production process, 2021

Quantity in 1,000 pounds, shares in percent

Item	Quantity	Share
Batch	***	***
Continuous	***	***
Total	***	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[10] NIBR is "acrylonitrile-isoprene-butadiene rubber" and is produced by incorporating isoprene during the production (polymerization) process of NBR. XNBR is "carboxylated NBR" and is produced by incorporating methacrylic acid during the production (polymerization) process of NBR.

[11] Continuous production is an NBR production process that relies on a series of linked reactors through which producers feed input monomers to generate NBR. Batch production is an NBR production process in which producers feed input monomers into separate reactors that are not linked in a series.

Alternative products

As shown in table VII-6, responding firms in France produced other products on the same equipment and machinery used to produce NBR. *** reported increases in out-of-scope production, resulting in a *** percent increase during 2019-21. These out-of-scope products include ***.

Table VII-6
NBR: Producers' in France overall capacity and production on the same equipment as subject production, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2019	2020	2021
Overall capacity	Quantity	***	***	***
NBR production	Quantity	***	***	***
Out-of-scope production: Latex NBR	Quantity	***	***	***
Out-of-scope production: Other products	Quantity	***	***	***
Out-of-scope production: All products	Quantity	***	***	***
Total production	Quantity	***	***	***
Overall capacity utilization	Ratio	***	***	***
NBR production	Share	***	***	***
Out-of-scope production: Latex NBR	Share	***	***	***
Out-of-scope production: Other products	Share	***	***	***
Out-of-scope production: All products	Share	***	***	***
Total production	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Exports

According to GTA, the leading export markets for NBR from France are the United States and Germany (table VII-7). During 2021, the United States was the top export market for NBR from France, accounting for 23.7 percent, followed by Germany, accounting for 18.2 percent.

Table VII-7
NBR: Exports from France, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2019	2020	2021
United States	Quantity	30,201	25,182	33,924
Germany	Quantity	30,548	26,777	26,101
China	Quantity	13,401	13,218	15,512
Turkey	Quantity	4,361	5,871	8,655
Japan	Quantity	8,384	5,658	8,046
Taiwan	Quantity	9,039	7,862	7,390
Italy	Quantity	6,308	9,026	7,102
Spain	Quantity	4,082	4,175	4,359
Sweden	Quantity	3,160	3,169	3,836
All other destination markets	Quantity	39,236	32,587	28,477
All destination markets	Quantity	148,720	133,524	143,402
United States	Value	38,190	28,229	40,433
Germany	Value	43,116	34,544	41,679
China	Value	18,950	17,616	24,844
Turkey	Value	5,810	6,210	12,487
Japan	Value	11,154	6,429	10,482
Taiwan	Value	11,387	8,128	9,810
Italy	Value	7,714	8,231	11,174
Spain	Value	5,279	4,738	6,360
Sweden	Value	3,925	3,440	5,718
All other destination markets	Value	50,038	37,344	41,842
All destination markets	Value	195,562	154,907	204,829

Table continued.

Table VII-7 Continued
NBR: Exports from France, by period

Unit values in dollars per pound; shares in percent

Destination market	Measure	2019	2020	2021
United States	Unit value	1.26	1.12	1.19
Germany	Unit value	1.41	1.29	1.60
China	Unit value	1.41	1.33	1.60
Turkey	Unit value	1.33	1.06	1.44
Japan	Unit value	1.33	1.14	1.30
Taiwan	Unit value	1.26	1.03	1.33
Italy	Unit value	1.22	0.91	1.57
Spain	Unit value	1.29	1.13	1.46
Sweden	Unit value	1.24	1.09	1.49
All other destination markets	Unit value	1.28	1.15	1.47
All destination markets	Unit value	1.31	1.16	1.43
United States	Share of quantity	20.3	18.9	23.7
Germany	Share of quantity	20.5	20.1	18.2
China	Share of quantity	9.0	9.9	10.8
Turkey	Share of quantity	2.9	4.4	6.0
Japan	Share of quantity	5.6	4.2	5.6
Taiwan	Share of quantity	6.1	5.9	5.2
Italy	Share of quantity	4.2	6.8	5.0
Spain	Share of quantity	2.7	3.1	3.0
Sweden	Share of quantity	2.1	2.4	2.7
All other destination markets	Share of quantity	26.4	24.4	19.9
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official import statistics from France under HS subheading 4002.59, as reported by various national statistical authorities in the IHS/GTA database, accessed May 10, 2022.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2021 data.

The industry in Mexico

The Commission issued a foreign producers' or exporters' questionnaire to one firm believed to produce and/or export NBR from Mexico.[12] A usable response to the Commission's questionnaire was received from this firm, Industrias Negromex, S.A. de C.V. ("Negromex"). This firm's exports to the United States accounted for *** U.S. imports of NBR from Mexico in 2021.[13] According to an estimate requested of Negromex, the production of NBR in Mexico reported in its questionnaire accounts for *** percent of NBR production in Mexico.[14] Table VII-8 presents information on the NBR operations of Negromex in Mexico.

Table VII-8
NBR: Summary data for producers in Mexico, 2021

Quantity in 1,000 pounds; share in percent

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
Negromex	***	100.0	***	100.0	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[12] This firm was identified through a review of information submitted in the petitions and presented in third-party sources.

[13] Exports from Mexico accounted for *** percent of U.S. imports from Mexico in 2021, as reported in the questionnaire response. The difference between the import and export quantities is likely due to timing differences and recordkeeping.

[14] ***.

Changes in operations

As presented in table VII-9, Negromex reported an operational and/or organizational change (a revised labor agreement) since January 1, 2019.

Table VII-9
NBR: Reported changes in operations in Mexico since January 1, 2019, by firm

Item	Firm name and accompanying narrative response
Revised labor agreements	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on NBR

Table VII-10 presents information on the NBR operations of Negromex in Mexico. Negromex's NBR capacity decreased by *** percent during 2019-21 and is projected to remain unchanged in 2022 and 2023.[15] Negromex's NBR production decreased by *** percent during 2019-21 but is projected to increase by *** percent between 2021 and 2023. A larger decrease in capacity than production resulted in a *** percentage point increase in capacity utilization between 2019 and 2021. Negromex does not produce *** XNBR.[16]

Export shipments accounted for the majority (over *** percent) of Negromex's total NBR shipments during the data collection period. Roughly *** of export shipments went to the United States and *** went to all other markets over the data collection period.[17] Export shipments to the United States decreased, while home market shipments and export shipments

[15] ***. Email from ***, April 15, 2022.
[16] Conference transcript, p. 128 (Quintero).
[17] All other export markets include ***.

to all other markets increased during the 2019-21 period, resulting in a *** percentage point decrease in export shipments to the United States as a share of total shipments.

Export shipments to the United States, home market shipments, and export shipments to all other markets are each projected to remain unchanged from their 2021 levels in 2022 and 2023.[18]

End-of-period inventories decreased *** percent during 2019-20, then increased *** percent during 2020-21, for an overall *** percent decrease during 2019-21. The ratio of inventories to total shipments ranged from *** to *** percent during the data collection period.

Table VII-10
NBR: Data on industry in Mexico, by period

Quantity in 1,000 pounds

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Internal consumption	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Home market shipments	***	***	***	***	***
Exports to the United States	***	***	***	***	***
Exports to all other markets	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***

Table continued.

[18] ***.

Table VII-10 Continued
NBR: Data on industry in Mexico, by period

Ratio and share in percent

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity utilization ratio	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***
Internal consumption share	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***
Home market shipments share	***	***	***	***	***
Exports to the United States share	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***
Export shipments share	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

As shown in table VII-11, Negromex produces NBR using both batch and continuous methods,[19] *** of which is produced using the continuous method.

Table VII-11
NBR: Production in Mexico, by production process, 2021

Quantity in 1,000 pounds, shares in percent

Item	Quantity	Share
Batch	***	***
Continuous	***	***
Total	***	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[19] Conference transcript, p. 111.

Alternative products

As shown in table VII-12, Negromex produced other products (***) on the same equipment or machinery used to produce NBR. Given that NBR production decreased while production of other products increased during 2019-21, out-of-scope production as a share of total production increased by *** percentage points during 2019-21.

Table VII-12
NBR: Producer in Mexico overall capacity and production on the same equipment as subject production, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2019	2020	2021
Overall capacity	Quantity	***	***	***
NBR production	Quantity	***	***	***
Out-of-scope production: Latex NBR	Quantity	***	***	***
Out-of-scope production: Other products	Quantity	***	***	***
Out-of-scope production: All products	Quantity	***	***	***
Total production	Quantity	***	***	***
Overall capacity utilization	Ratio	***	***	***
NBR production	Share	***	***	***
Out-of-scope production: Latex NBR	Share	***	***	***
Out-of-scope production: Other products	Share	***	***	***
Out-of-scope production: All products	Share	***	***	***
Total production	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Exports

According to GTA, the leading export markets for NBR from Mexico are the United States, Spain, and Turkey (table VII-13). During 2021, the United States was the top export market for NBR from Mexico, accounting for 45.3 percent, followed by Spain, accounting for 18.9 percent.

Table VII-13
NBR: Exports from Mexico, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2019	2020	2021
United States	Quantity	17,650	14,312	12,258
Spain	Quantity	5,058	4,471	5,124
Turkey	Quantity	3,003	4,170	4,529
Germany	Quantity	1,277	1,086	1,072
Brazil	Quantity	986	1,328	909
China	Quantity	834	781	840
Colombia	Quantity	536	141	616
India	Quantity	553	356	451
Canada	Quantity	196	102	344
All other destination markets	Quantity	1,678	1,141	899
All destination markets	Quantity	31,772	27,887	27,041
United States	Value	16,675	10,893	14,847
Spain	Value	4,538	2,965	6,354
Turkey	Value	2,675	2,987	5,134
Germany	Value	1,206	845	1,237
Brazil	Value	1,009	983	1,136
China	Value	743	581	773
Colombia	Value	624	137	856
India	Value	481	199	325
Canada	Value	391	194	716
All other destination markets	Value	1,801	1,188	1,359
All destination markets	Value	30,142	20,971	32,736

Table continued.

Table VII-13 Continued
NBR: Exports from Mexico, by period

Unit values in dollars per pound; shares in percent

Destination market	Measure	2019	2020	2021
United States	Unit value	0.94	0.76	1.21
Spain	Unit value	0.90	0.66	1.24
Turkey	Unit value	0.89	0.72	1.13
Germany	Unit value	0.94	0.78	1.15
Brazil	Unit value	1.02	0.74	1.25
China	Unit value	0.89	0.74	0.92
Colombia	Unit value	1.16	0.97	1.39
India	Unit value	0.87	0.56	0.72
Canada	Unit value	1.99	1.90	2.08
All other destination markets	Unit value	1.07	1.04	1.51
All destination markets	Unit value	0.95	0.75	1.21
United States	Share of quantity	55.6	51.3	45.3
Spain	Share of quantity	15.9	16.0	18.9
Turkey	Share of quantity	9.5	15.0	16.7
Germany	Share of quantity	4.0	3.9	4.0
Brazil	Share of quantity	3.1	4.8	3.4
China	Share of quantity	2.6	2.8	3.1
Colombia	Share of quantity	1.7	0.5	2.3
India	Share of quantity	1.7	1.3	1.7
Canada	Share of quantity	0.6	0.4	1.3
All other destination markets	Share of quantity	5.3	4.1	3.3
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official import statistics from Mexico under HS subheading 4002.59, as reported by various national statistical authorities in the IHS/GTA database, accessed May 10, 2022.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2021 data.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

The industry in South Korea

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce and/or export NBR from South Korea.[20] A usable response to the Commission's questionnaire was received from one firm: Kumho Petrochemical Co., Ltd. ("Kumho").[21] Kumho's exports to the United States accounted for *** percent of U.S. imports of NBR from South Korea in 2021. According to an estimate requested of Kumho, its production of NBR in South Korea reported in its questionnaire response accounts for approximately *** percent of overall production of NBR in South Korea.[22] Table VII-14 presents information on the NBR operations of Kumho in South Korea.

Table VII-14
NBR: Summary data for producer in South Korea, 2021

Quantity in 1,000 pounds; share in percent

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
Kumho	***	100.0	***	100.0	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[20] These firms were identified through a review of information submitted in the petitions and presented in third-party sources.

[21] The other firm, ***. Email from ***, July 19, 2021. As shown in table IV-1, ***.

[22] ***. Respondent Kumho's postconference brief, exh. 24. LG Chem circulated a letter to its customers on January 28, 2022, advising them that the company had decided to continue its NBR operations. Hearing transcript, pp. 24-25 (Cail) and ***. Staff note that U.S. shipments of NBR imports from LG Chem accounted for *** percent of U.S. apparent consumption in 2021 and U.S. imports of NBR from LG Chem accounted for *** percent of U.S. imports from South Korea and *** percent of U.S. imports from subject sources in 2021. While ***.

Changes in operations

Kumho reported *** operational or organizational changes since January 1, 2019.

Operations on NBR

Table VII-15 presents information on the NBR operations of the responding producer Kumho in South Korea. Production increased by *** percent from 2019-21 and is projected to increase *** percent from 2021-2023. Capacity did not change during 2019-21 and is not projected to change in 2021-23. Given an increase in production and *** in capacity, capacity utilization increased *** percentage points during 2019-21 to *** percent. Kumho does not produce *** XNBR[23] and *** of its NBR was produced using the *** method.

Export shipments accounted for the majority of Kumho's total NBR shipments, ranging from *** to *** percent of total shipments, the majority of which go to export markets other than the United States.[24] Exports to the United States, exports to all other markets, and home market shipments all increased during 2019-21 by ***, ***, and *** percent, respectively.[25] The share of exports to the United States and home market shipments to total shipments increased during 2019-21, by *** and *** percentage points, respectively, while the share of exports to all other markets to total shipments decreased by *** percentage points during 2019-21. Exports to the United States and home market shipments are projected to decrease from 2021 to 2023, by *** and *** percent, respectively, while exports to all other markets are projected to increase during the same period by *** percent.[26]

[23] Conference transcript, p. 123 (Kendler).
[24] Kumho's other export markets include ***.
[25] ***.
[26] ***.

End-of-period inventories increased by *** percent during 2019-21. The ratio of inventories to total shipments ranged from *** to *** percent during the data collection period.

Table VII-15
NBR: Data on industry in South Korea, by period

Quantity in 1,000 pounds

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Internal consumption	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Home market shipments	***	***	***	***	***
Exports to the United States	***	***	***	***	***
Exports to all other markets	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table VII-15 Continued
NBR: Data on industry in South Korea, by period

Ratio and share in percent

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity utilization ratio	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***
Internal consumption share	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***
Home market shipments share	***	***	***	***	***
Exports to the United States share	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***
Export shipments share	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

Responding firm Kumho reported *** other products produced on the same equipment or machinery, or using the same workers, used to produce NBR. Kumho explained that ***.

Exports

According to GTA, the leading export markets for NBR from South Korea are China, the United States, and India (table VII-16). During 2021, China was the top export market for NBR from South Korea, accounting for 29.9 percent, followed by the United States, accounting for 11.2 percent.

Table VII-16
NBR: Exports from South Korea, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2019	2020	2021
United States	Quantity	29,128	19,245	32,975
China	Quantity	74,199	101,277	88,285
India	Quantity	38,404	32,319	31,036
Vietnam	Quantity	20,544	21,365	18,897
Italy	Quantity	13,693	14,954	15,024
Turkey	Quantity	9,536	9,743	13,065
Indonesia	Quantity	10,170	9,017	11,435
Thailand	Quantity	8,588	8,207	11,260
Germany	Quantity	12,641	11,790	11,025
All other destination markets	Quantity	60,737	61,186	61,953
All destination markets	Quantity	277,640	289,104	294,954
United States	Value	25,914	13,106	35,422
China	Value	61,110	65,674	91,998
India	Value	31,521	22,522	34,407
Vietnam	Value	18,613	15,807	21,369
Italy	Value	10,764	9,522	16,445
Turkey	Value	7,868	6,649	15,556
Indonesia	Value	9,787	7,688	14,568
Thailand	Value	7,340	5,817	12,396
Germany	Value	10,708	7,896	12,660
All other destination markets	Value	50,518	41,850	67,900
All destination markets	Value	234,142	196,531	322,721

Table continued.

Table VII-16 Continued
NBR: Exports from South Korea, by period

Unit values in dollars per pound; shares in percent

Destination market	Measure	2019	2020	2021
United States	Unit value	0.89	0.68	1.07
China	Unit value	0.82	0.65	1.04
India	Unit value	0.82	0.70	1.11
Vietnam	Unit value	0.91	0.74	1.13
Italy	Unit value	0.79	0.64	1.09
Turkey	Unit value	0.83	0.68	1.19
Indonesia	Unit value	0.96	0.85	1.27
Thailand	Unit value	0.85	0.71	1.10
Germany	Unit value	0.85	0.67	1.15
All other destination markets	Unit value	0.83	0.68	1.10
All destination markets	Unit value	0.84	0.68	1.09
United States	Share of quantity	10.5	6.7	11.2
China	Share of quantity	26.7	35.0	29.9
India	Share of quantity	13.8	11.2	10.5
Vietnam	Share of quantity	7.4	7.4	6.4
Italy	Share of quantity	4.9	5.2	5.1
Turkey	Share of quantity	3.4	3.4	4.4
Indonesia	Share of quantity	3.7	3.1	3.9
Thailand	Share of quantity	3.1	2.8	3.8
Germany	Share of quantity	4.6	4.1	3.7
All other destination markets	Share of quantity	21.9	21.2	21.0
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 4002.59 as reported by South Korea Trade Statistics Promotion Institute (KTSPI) in the Global Trade Atlas database, accessed May 10, 2022.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2021 data.

Subject countries combined

Table VII-17 presents summary data on NBR operations of the reporting subject producers in the subject countries.

Table VII-17
NBR: Data on the industry in subject countries, by period

Quantity in 1,000 pounds

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Internal consumption	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***
Home market shipments	***	***	***	***	***
Exports to the United States	***	***	***	***	***
Exports to all other markets	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***

Table continued.

Table VII-17 Continued
NBR: Data on the industry in subject countries, by period

Ratio and share in percent

Item	2019	2020	2021	Projection 2022	Projection 2023
Capacity utilization ratio	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***
Internal consumption share	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***
Home market shipments share	***	***	***	***	***
Exports to the United States share	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***
Export shipments share	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. inventories of imported merchandise

Table VII-18 presents data on U.S. importers' reported inventories of NBR. Inventories of imports from subject sources decreased during 2019-20 by 9.6 percent, then increased during 2020-21 by 110.5 percent, for an overall 90.2 percent increase during 2019-21.[27] The ratio of inventories of subject imports to U.S. shipments of imports increased by *** percentage points, from *** percent in 2019 to *** percent in 2021.

Inventories of imports from nonsubject sources increased during 2019-20 by *** percent, then decreased during 2020-21 by *** percent, for an overall *** percent decrease during 2019-21. The ratio of inventories of nonsubject imports to U.S. shipments ranged from *** percent in 2019 to *** percent in 2020.

[27] Most of the increase in inventories of NBR from subject sources during 2020-21 was from *** increase in end-of-period inventories of NBR from *** and from U.S. importers' increase in end-of-period inventories of NBR from ***. Arlanxeo (Arlanxeo USA and Arlanxeo France) explained that increased U.S. inventories of subject imports in 2021 reflected a choice by subject importers to maintain additional inventories in the United States, rather than abroad, as a result of the continuing supply chain issues and shipping constraints associated with the COVID-19 pandemic. Arlanxeo USA *** its days inventory outstanding from an average of *** days in 2019 and *** days in 2020, to *** days in 2021. Respondent Arlanxeo's posthearing brief, responses to questions, pp. 32-35. Staff note that ***, which may have contributed to the increase in end-of-period inventories of NBR from ***.

Table VII-18
NBR: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds; ratio in percent

Measure	Source	2019	2020	2021
Inventories quantity	France	***	***	***
Ratio to imports	France	***	***	***
Ratio to U.S. shipments of imports	France	***	***	***
Ratio to total shipments of imports	France	***	***	***
Inventories quantity	Mexico	***	***	***
Ratio to imports	Mexico	***	***	***
Ratio to U.S. shipments of imports	Mexico	***	***	***
Ratio to total shipments of imports	Mexico	***	***	***
Inventories quantity	South Korea	***	***	***
Ratio to imports	South Korea	***	***	***
Ratio to U.S. shipments of imports	South Korea	***	***	***
Ratio to total shipments of imports	South Korea	***	***	***
Inventories quantity	Subject	9,549	8,631	18,165
Ratio to imports	Subject	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***
Ratio to total shipments of imports	Subject	***	***	***
Inventories quantity	Japan	***	***	***
Ratio to imports	Japan	***	***	***
Ratio to U.S. shipments of imports	Japan	***	***	***
Ratio to total shipments of imports	Japan	***	***	***
Inventories quantity	All other	***	***	***
Ratio to imports	All other	***	***	***
Ratio to U.S. shipments of imports	All other	***	***	***
Ratio to total shipments of imports	All other	***	***	***
Inventories quantity	Nonsubject	***	***	***
Ratio to imports	Nonsubject	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***
Inventories quantity	All	***	***	***
Ratio to imports	All	***	***	***
Ratio to U.S. shipments of imports	All	***	***	***
Ratio to total shipments of imports	All	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. importers' outstanding orders

The Commission requested that importers indicate whether they imported or arranged for the importation of NBR after December 31, 2021. Their reported data is presented in table VII-19.

Table VII-19
NBR: U.S. importers' arranged imports, by source and period

Quantity in 1,000 pounds

Source	Jan-Mar 2022	Apr-Jun 2022	Jul-Sept 2022	Oct-Dec 2022	Total
France	***	***	***	***	***
Mexico	***	***	***	***	***
South Korea	***	***	***	***	***
Subject	***	***	***	***	***
Japan	***	***	***	***	***
All other	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Third-country trade actions

NBR from France and South Korea is subject to antidumping or countervailing duties in countries other than the United States. Brazil applies antidumping duties to imports of NBR from both South Korea and France.[28] China applies antidumping duties to imports of NBR from South Korea and Japan.[29] India applies antidumping duties to imports of NBR from South Korea.[30] On May 12, 2021, the Government of India published its final findings to impose

[28] On March 2, 2018, preliminary duties on France and South Korea were imposed. The rate of duty on imports from France was USD 0.64 or 0.75 per kg depending on the company. The rate of duty on imports from the South Korea was USD 0.23 or 0.45 per kg depending on the company. The duty was in effect for six months. On August 13, 2018, Brazilian authorities imposed a final definitive antidumping duty to imports of NBR from France and South Korea. The rate of duty on imports from South Korea was USD 0.15 or 0.34 per kg. The rate of duty on imports from France was USD 0.65 or 0.92 per kg depending on the company. The measure is in force for a period of 5 years. AD duties do not apply to nitrile rubbers in liquid form and nitrile rubbers in powder produced through the spray drying process with a particle size equal to or less than 0.16 mm. Brazilian Executive Secretary of the Foreign Trade Chamber, "Resolution No. 53 of August 10, 2018," August 13, 2018, Google translation from Portuguese to English available, http://www.camex.gov.br/component/content/article/62-resolucoes-da-camex/em-vigor/2066-resolucao-n-53-de-10-de-agosto-de-2018; Global Trade Alert, "Brazil: Definitive Anti-dumping Duty on Imports of Nitrile Rubber (NBR) from France and the Republic of Korea," March 2, 2018, https://www.globaltradealert.org/intervention/57568/anti-dumping/brazil-definitive-antidumping-duty-on-imports-of-nitrile-rubber-nbr-from-france-and-the-republic-of-korea.

[29] Temporary anti-dumping duties began July 16, 2018. The final order began November 9, 2018 and is in effect for 5 years. The final ADD rates for South Korea were as follows: Kumho Petrochemical, 12.0 percent; LG Chem, 15.0 percent; all others, 37.3 percent. The final ADD rates from Japan were as follows: Zeon Corporation, 28.1 percent; JSR Corporation, 16 percent; all others, 56.4 percent. Reuters, "China Imposes Temporary Anti-dumping Measures on Japan, S. Korea Nitrile Rubber," July 16, 2018, https://www.reuters.com/article/china-antidumping-rubber/china-imposes-temporary-anti-dumping-measures-on-japan-s-korea-nitrile-rubber-idUKB9N1U401P; Rubber and Plastics News, "China Places Tariffs on Nitrile Rubber from South Korea, Japan," July 17, 2018, https://www.rubbernews.com/article/20180717/NEWS/180719947/china-places-tariffs-on-nitrile-rubber-from-south-korea-japan.

[30] On March 15, 1996, the Government of India initiated an investigation of NBR from Germany and South Korea. There is a long history of imposition of duties on South Korea. The government of India voted on November 24, 2020, in its sunset investigation, to continue AD duties on South Korea. These duties are to be imposed 5 years from the publication of the notice on November 24, 2020. The AD duty rates are as follows: Kumho Petrochemical Company Ltd., US $47.43 per metric ton; others, US $327.12 per metric ton. Certain products are excluded from the AD duties, which are latex NBR, powder NBR, and carboxylate NBR. Government of India, Ministry of Commerce, Notice of Initiation of Investigation, March 15, 1996, https://www.dgtr.gov.in/sites/default/files/Initiation_9.pdf. Government of India, Ministry of Commerce, Notification Final Findings, November 24, 2020, pp. 36-37 (AD duties) and p. 37 (certain product exclusions), https://www.dgtr.gov.in/sites/default/files/NCV%20NBR%20Final%20Finding-1%20%281%29.pdf.

antidumping duties to imports from the EU, China, Russia, and Japan.[31] Subsequently, on July 20, 2021, the Central Government of India decided not to impose antidumping duties on NBR from China, the EU, Japan, and Russia.[32] Respondent Negromex of Mexico is not aware of any orders imposed by third countries on its exports.[33]

Information on nonsubject countries

Global capacity of solid NBR was *** metric tons in 2022. Global production was at *** metric tons and global consumption was at *** metric tons in 2021.[34] The capacities of each of the global producers are listed in table VII-20. Global production by region is depicted in table VII-21. Global consumption by region is depicted in table VII-22. Global consumption by region and end use category is shown in table VII-23. In

[31] On May 26, 2020, the government of India initiated an antidumping investigation on NBR from China, the European Union, Japan, and Russia. On May 12, 2021, final findings were published, and all four countries were found to be dumping, and the AD duties were published. The imposition was expected within 3 months of the published final findings. The AD duties were determined for all countries and companies to be a rate of US $2086.78 per metric ton, with the exception of JSR Japan that had a rate of "not applicable." Liquid NBR, latex NBR, powdered NBR, and carboxylated NBR are excluded from the scope (final determination, p. 6 of 61). Government of India, Directorate General of Trade Remedies, Department of Commerce, "Anti-dumping investigation concerning imports of 'Acrylonitrile Butadiene Rubber' (NBR) originating in or exported from China PR, European Union, Japan and Russia," Case No.: 6/18/2020-DGTR, accessed July 30, 2021, https://www.dgtr.gov.in/anti-dumping-cases/anti-dumping-investigation-concerning-imports-%E2%80%9Cacrylonitrile-butadiene-rubber%E2%80%9D; the antidumping duties are published in the final findings from the Indian government, May 12, 2021, pp. 59-61, https://www.dgtr.gov.in/sites/default/files/Final%20findings%20of%20NBR%20dated%2012th%20May%2C%202021%20in%20word%20revised.pdf; The Economic Times, "Commerce Ministry seeks anti-dumping duty on certain rubber imported from 4 countries," May 13, 2021, https://economictimes.indiatimes.com/news/economy/foreign-trade/comm-min-seeks-anti-dumping-duty-on-certain-rubber-imported-from-4-countries/articleshow/82606187.cms; Jestin, Priya, "India to Impose Anti-dumping duty on NBR from China, Japan, EU, and Russia," May 18, 2021, https://www.icis.com/explore/resources/news/2021/05/18/10640517/india-to-impose-antidumping-duty-on-nbr-from-china-japan-eu-russia.

[32] The Central Government of India decided not to impose antidumping duties on all 4 countries of the investigation (China, EU, Japan, and Russia) published in its final findings. Government of India, Ministry of Finance, Department of Revenue, Tax Research Unit, "Office Memorandum," July 20, 2021. https://www.dgtr.gov.in/sites/default/files/OM_NBR_ADD.pdf. A list of the proceedings, including the final findings, is published by the Government of India: Anti-dumping investigation concerning imports of "Acrylonitrile Butadiene Rubber" (NBR) originating in or exported from China PR, European Union, Japan and Russia. | Directorate General of Trade Remedies | MOCI | GOI (dgtr.gov.in).

[33] Respondent Negromex's postconference brief, p. 23.

[34] IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, pp. 9, 13-14.

2021, China had the largest production volume of *** metric tons, followed by South Korea with *** metric tons, Western Europe with *** metric tons, Japan with *** metric tons, and Central and Eastern Europe with *** metric tons.[35] Global consumption by end use was the highest in the automotive category at *** metric tons in 2021, followed by technical rubber goods at *** metric tons, and all other uses at *** metric tons.[36]

Non-latex NBR global exports are shown in table VII-24. The largest global exporter by quantity in 2021 was South Korea with a 34.7 percent share ($322.7 million), followed by France with a 16.9 percent share ($204.8 million), and Japan with a 13.7 percent share ($156.2 million).

[35] IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, p. 13.
[36] IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, p. 17.

Table VII-20
NBR: Annual capacities, as of March 2022, by producer and by country or region

Quantity in 1,000 metric tons; share in percent

Company	Company global rank	Country / Region	Quantity	Share
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
All companies	***	***	***	***

Source: IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, p. 9.

Note: Shares may not round to total due to rounding.

Note: Joint ventures have been split accordingly. “World: other” represents producers in India, Mexico, and Taiwan.

Table VII-21
NBR: Global production quantity, 2021 (dry basis), by country or region

Quantity in 1,000 metric tons

Country / region	NBR solid
United States	***
Canada	***
Mexico	***
Central and South America	***
Total Americas	***
Western Europe	***
Central and Eastern Europe	***
Middle East	***
Africa	***
Total EMEA	***
China (mainland)	***
India	***
Japan	***
Malaysia	***
South Korea	***
Taiwan	***
Thailand	***
Other	***
Total Asia	***
Global total	***

Source: IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, p. 13.

Note: These numbers may vary by up to +/- 10 percent due to the nature of wet basis to dry basis status.
EMEA is Europe, the Middle East, and Africa.

Table VII-22
NBR: Global consumption quantity, 2021 (dry basis), by country or region

Quantity in 1,000 metric tons

Country / region	NBR solid
United States	***
Canada	***
Mexico	***
Central and South America	***
Total Americas	***
Western Europe	***
Central and Eastern Europe	***
Middle East	***
Africa	***
Total EMEA	***
China (mainland)	***
India	***
Japan	***
Malaysia	***
South Korea	***
Taiwan	***
Thailand	***
Other	***
Total Asia	***
Global total	***

Source: IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, p. 14.

Note: These numbers may vary by up to +/- 10 percent due to the nature of wet basis to dry basis status.
EMEA is Europe, the Middle East and Africa.

Table VII-23
NBR: Global consumption quantity of NBR solid by major region and end use category, 2021 and 2026 (predicted)

Quantity in 1,000 metric tons; annual average growth rate in percent

Country / region	End use category	2021	2026 (predicted)	Annual average growth rate
United States	Automotive	***	***	***
Western Europe	Automotive	***	***	***
China	Automotive	***	***	***
Japan	Automotive	***	***	***
Total	Automotive	***	***	***
United States	Rubber goods	***	***	***
Western Europe	Rubber goods	***	***	***
China	Rubber goods	***	***	***
Japan	Rubber goods	***	***	***
Total	Rubber goods	***	***	***
United States	Other	***	***	***
Western Europe	Other	***	***	***
China	Other	***	***	***
Japan	Other	***	***	***
Total	Other	***	***	***
United States	All categories	***	***	***
Western Europe	All categories	***	***	***
China	All categories	***	***	***
Japan	All categories	***	***	***
Total	All categories	***	***	***

Source: IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, April 2022, p. 17.

Table VII-24
NBR: Global exports, by source and period

Value in 1,000 dollars; quantity in 1,000 pounds

Exporting country	Measure	2019	2020	2021
United States	Quantity	32,722	27,216	33,854
France	Quantity	148,720	133,524	143,402
Mexico	Quantity	31,772	27,887	27,041
South Korea	Quantity	277,640	289,104	294,954
Subject	Quantity	458,132	450,515	465,398
Japan	Quantity	101,347	105,331	115,955
Russia	Quantity	76,046	72,807	82,883
Belgium	Quantity	22,982	22,626	31,326
Poland	Quantity	20,057	17,596	23,155
China	Quantity	29,406	26,688	20,335
Taiwan	Quantity	14,571	12,700	19,802
Netherlands	Quantity	10,192	12,155	15,012
Germany	Quantity	12,110	9,897	12,155
All other exporters	Quantity	27,192	26,969	29,516
All reporting exporters	Quantity	804,757	784,501	849,392
United States	Value	133,235	108,906	155,276
France	Value	195,562	154,907	204,829
Mexico	Value	30,142	20,971	32,736
South Korea	Value	234,142	196,531	322,721
Subject	Value	459,847	372,410	560,286
Japan	Value	130,445	117,594	156,177
Russia	Value	57,829	43,355	84,489
Belgium	Value	80,900	80,374	104,790
Poland	Value	17,659	13,193	25,327
China	Value	33,615	28,161	33,312
Taiwan	Value	17,878	16,168	25,709
Netherlands	Value	32,107	36,863	47,798
Germany	Value	55,679	46,648	61,599
All other exporters	Value	34,454	26,606	40,204
All reporting exporters	Value	1,053,647	890,276	1,294,968

Table continued.

Table VII-24 Continued
NBR: Global exports, by source and period

Unit values in dollars per pound; shares in percent

Exporting country	Measure	2019	2020	2021
United States	Unit value	4.07	4.00	4.59
France	Unit value	1.31	1.16	1.43
Mexico	Unit value	0.95	0.75	1.21
South Korea	Unit value	0.84	0.68	1.09
Subject	Unit value	1.00	0.83	1.20
Japan	Unit value	1.29	1.12	1.35
Russia	Unit value	0.76	0.60	1.02
Belgium	Unit value	3.52	3.55	3.35
Poland	Unit value	0.88	0.75	1.09
China	Unit value	1.14	1.06	1.64
Taiwan	Unit value	1.23	1.27	1.30
Netherlands	Unit value	3.15	3.03	3.18
Germany	Unit value	4.60	4.71	5.07
All other exporters	Unit value	1.27	0.99	1.36
All reporting exporters	Unit value	1.31	1.13	1.52
United States	Share of quantity	4.1	3.5	4.0
France	Share of quantity	18.5	17.0	16.9
Mexico	Share of quantity	3.9	3.6	3.2
South Korea	Share of quantity	34.5	36.9	34.7
Subject	Share of quantity	56.9	57.4	54.8
Japan	Share of quantity	12.6	13.4	13.7
Russia	Share of quantity	9.4	9.3	9.8
Belgium	Share of quantity	2.9	2.9	3.7
Poland	Share of quantity	2.5	2.2	2.7
China	Share of quantity	3.7	3.4	2.4
Taiwan	Share of quantity	1.8	1.6	2.3
Netherlands	Share of quantity	1.3	1.5	1.8
Germany	Share of quantity	1.5	1.3	1.4
All other exporters	Share of quantity	3.4	3.4	3.5
All reporting exporters	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 4002.59 as reported by various national statistical authorities supplemented with official import statistics from France and Mexico under HS subheading 4002.59 as reported by various national statistical authorities in the IHS/GTA database, accessed May 10, 2022.

Note: United States is shown at the top, followed by the countries under investigation, then all remaining top exporting countries in descending order of 2021 data. Mirror data is presented for France, as its export data was suppressed by France ***.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
86 FR 35825, July 7, 2021	*Acrylonitrile-Butadiene Rubber From France, Korea, and Mexico; Institution of Anti-Dumping Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.govinfo.gov/content/pkg/FR-2021-07-07/pdf/2021-14403.pdf
86 FR 40192, July 27, 2021	*Acrylonitrile-Butadiene Rubber From France, the Republic of Korea, and Mexico: Initiation of Less-Than-Fair Value Investigations*	https://www.govinfo.gov/content/pkg/FR-2021-07-27/pdf/2021-15895.pdf
86 FR 46885, August 20, 2021	*Acrylonitrile-Butadiene Rubber From France, Korea, and Mexico*	https://www.govinfo.gov/content/pkg/FR-2021-08-20/pdf/2021-17844.pdf
87 FR 5787, February 2, 2022	*Acrylonitrile-Butadiene Rubber From France: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Partial Affirmative Determination of Critical Circumstances, Postponement of Final Determination, and Extension of Provisional Measures*	https://www.govinfo.gov/content/pkg/FR-2022-02-02/pdf/2022-02112.pdf

Citation	Title	Link
87 FR 5796, February 2, 2022	*Acrylonitrile-Butadiene Rubber From the Republic of Korea: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances, in Part, Postponement of Final Determination, and Extension of Provisional Measures*	https://www.govinfo.gov/content/pkg/FR-2022-02-02/pdf/2022-02113.pdf
87 FR 5790, February 2, 2022	*Acrylonitrile-Butadiene Rubber From Mexico: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures*	https://www.govinfo.gov/content/pkg/FR-2022-02-02/pdf/2022-02114.pdf
87 FR 11481, March 1, 2022	*Acrylonitrile-Butadiene Rubber (NBR) From France, Mexico, and South Korea; Scheduling of the Final Phase of Anti-Dumping Duty Investigations*	https://www.govinfo.gov/content/pkg/FR-2022-03-01/pdf/2022-04252.pdf
87 FR 37833, June 24, 2022	*Acrylonitrile-Butadiene Rubber From France: Final Affirmative Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*	https://www.govinfo.gov/content/pkg/FR-2022-06-24/pdf/2022-13560.pdf

Citation	Title	Link
87 FR 37825, June 24, 2022	*Acrylonitrile-Butadiene Rubber From the Republic of Korea: Final Affirmative Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*	https://www.govinfo.gov/content/pkg/FR-2022-06-24/pdf/2022-13561.pdf
87 FR 37829, June 24, 2022	*Acrylonitrile-Butadiene Rubber From the Republic of Mexico: Final Affirmative Determination of Sales at Less Than Fair Value*	https://www.govinfo.gov/content/pkg/FR-2022-06-24/pdf/2022-13562.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared in the United States International Trade Commission's hearing via videoconference:

Subject:	Acrylonitrile-Butadiene Rubber from France, Mexico, and South Korea
Inv. Nos.:	731-TA-1567-1569 (Final)
Date and Time:	June 1, 2022 - 9:30 a.m.

OPENING REMARKS:

In Support of Imposition (**Mert E. Arkan**, Barnes Richardson & Colburn LLP)
In Opposition to Imposition (**Brady W. Mills**, Morris Manning & Martin LLP)

In Support of Imposition of Antidumping and Countervailing Duty Orders:

Barnes Richardson & Coburn LLP
Washington, DC
on behalf of

Zeon Chemicals L.P.
Zeon GP, LLC

Michael Recchio, President & CEO, ZCLP

Brian Cail, Vice President of Sales & Marketing, ZCLP

LaStacia Dalton, Vice President of Administration and CFO, ZCLP

Mert E. Arkan) – OF COUNSEL

In Opposition to Imposition of
Antidumping and Countervailing Duty Orders:

Morris Manning & Martin LLP
Washington, DC
on behalf of

ARLANXEO Emulsion Rubber France S.A.S.
ARLANXEO USA LLC

John Dennerlein, Sales Manager, ARLANXEO USA LLC

Jason Suslak, Head of M&A and General Counsel, ARLANXEO USA LLC

Kyle Kuczynski, VP Finance, Jasper Rubber Products, Inc.

Emma K. Peterson, Director of International Trade Analytics, Morris, Manning & Martin, LLP

Shannon J. Crowe, International Trade Specialist, Morris, Manning & Martin, LLP

Brady W. Mills)
) – OF COUNSEL
Will Planert)

White & Case LLP
Washington, DC
on behalf of

Kumho Petrochemical Co., Ltd. ("KKPC")

Henry Shin, Regional Export Manager, Kumho Petrochemical Co., Ltd.

Ellen Clunk, Purchasing and Supply Chain Director – North America, Hexpol Compounding LLC

Bill Crowe, Global Lead Buyer, The Flint Group/Day International, Inc.

David Hart, Chairman of the Board, Mountville Mills, Inc.

William J. Moran)
Ron Kendler) – OF COUNSEL
C. Alex Dilley)

In Opposition to Imposition of
Antidumping and Countervailing Duty Orders (continued):

Alston & Bird LLP
Washington, DC
on behalf of

ITT Inc. ("ITT") and its subsidiary Wolverine Advanced Materials

Mary Beth Gustafsson, Senior Vice President, General Counsel,
ITT Inc./Wolverine Advanced Materials

Chunlian "Lian" Yang) – OF COUNSEL

Clark Hill PLLC
Washington, DC
on behalf of

Negromex, S.A. de C.V.
Dynasol. LLC

Daniela Quintero, Global Commercial Intelligence Manager, Dynasol, LLC

Jose Plaza, Commercial Manager America, Dynasol, LLC

Alejandro Morlett, Counsel, Industrias Negromex, S.A. de C.V.

William C. Sjoberg)
) – OF COUNSEL
Maram T. Salaheldin)

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Mert E. Arkan**, Barnes Richardson & Colburn LLP)
In Opposition to Imposition (**William C. Sjoberg**, Clark Hill PLLC)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
NBR: Summary data concerning the U.S. market, by period

Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data			Period changes		
	Calendar year			Comparison years		
	2019	2020	2021	2019-21	2019-20	2020-21
U.S. consumption quantity:						
Amount	110,392	86,802	101,744	▼(7.8)	▼(21.4)	▲17.2
Producers' share (fn1)	***	***	***	▲***	▲***	▲***
Importers' share (fn1):						
France	***	***	***	▲***	▲***	▼***
Mexico	***	***	***	▼***	▼***	▼***
South Korea	***	***	***	▲***	▼***	▲***
Subject sources	62.5	61.3	60.6	▼(1.9)	▼(1.2)	▼(0.7)
Japan	***	***	***	▲***	▲***	▼***
All other sources	***	***	***	▼***	▼***	▲***
Nonsubject sources	***	***	***	▲***	▲***	▲***
All import sources	***	***	***	▼***	▼***	▼***
U.S. consumption value:						
Amount	155,405	110,700	165,054	▲6.2	▼(28.8)	▲49.1
Producers' share (fn1)	***	***	***	▲***	▲***	▼***
Importers' share (fn1):						
France	***	***	***	▲***	▲***	▼***
Mexico	***	***	***	▼***	▼***	▼***
South Korea	***	***	***	▲***	▼***	▲***
Subject sources	54.6	51.9	54.4	▼(0.2)	▼(2.7)	▲2.5
Japan	***	***	***	▲***	▲***	▼***
All other sources	***	***	***	▼***	▼***	▲***
Nonsubject sources	***	***	***	▼***	▲***	▼***
All import sources	***	***	***	▼***	▼***	▲***
U.S. importers' U.S. shipments of imports from:						
France:						
Quantity	***	***	***	▲***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▲***	▼***	▲***
Mexico:						
Quantity	***	***	***	▼***	▼***	▼***
Value	***	***	***	▼***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▼***	▼***	▼***
South Korea:						
Quantity	***	***	***	▼***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▲***	▼***	▲***

Table continued.

Table C-1 continued

NBR: Summary data concerning the U.S. market, by period

Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data			Period changes		
	Calendar year			Comparison years		
	2019	2020	2021	2019-21	2019-20	2020-21
U.S. importers' U.S. shipments of imports from:--Continued						
Subject sources:						
Quantity	68,994	53,199	61,642	▼(10.7)	▼(22.9)	▲15.9
Value	84,870	57,462	89,843	▲5.9	▼(32.3)	▲56.4
Unit value	$1.23	$1.08	$1.46	▲18.5	▼(12.2)	▲34.9
Ending inventory quantity	9,549	8,631	18,165	▲90.2	▼(9.6)	▲110.5
Japan:						
Quantity	***	***	***	▼***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▼***	▲***	▼***
All other sources:						
Quantity	***	***	***	▼***	▼***	▲***
Value	***	***	***	▼***	▼***	▲***
Unit value	***	***	***	▼***	▼***	▲***
Ending inventory quantity	***	***	***	▲***	▲***	▲***
Nonsubject sources:						
Quantity	***	***	***	▼***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▼***	▲***	▼***
All import sources:						
Quantity	***	***	***	▼***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▲***	▼***	▲***
U.S. producers':						
Average capacity quantity	***	***	***	***	***	***
Production quantity	***	***	***	▼***	▼***	▲***
Capacity utilization (fn1)	***	***	***	▼***	▼***	▲***
U.S. shipments:						
Quantity	***	***	***	▼***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Export shipments:						
Quantity	***	***	***	▲***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	▼***	▼***	▼***
Inventories/total shipments (fn1)	***	***	***	▼***	▲***	▼***
Production workers	***	***	***	***	▲***	▼***
Hours worked (1,000s)	***	***	***	▼***	▼***	▼***
Wages paid ($1,000)	***	***	***	▲***	▼***	▲***
Hourly wages (dollars per hour)	***	***	***	▲***	▲***	▲***
Productivity (pounds per hour)	***	***	***	▼***	▼***	▲***
Unit labor costs	***	***	***	▲***	▲***	▼***

Table continued.

Table C-1 continued
NBR: Summary data concerning the U.S. market, by period

Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data			Period changes		
	Calendar year			Comparison years		
	2019	2020	2021	2019-21	2019-20	2020-21
U.S. producers':--Continued						
Net sales:						
Quantity	***	***	***	▲***	▼***	▲***
Value	***	***	***	▲***	▼***	▲***
Unit value	***	***	***	▲***	▼***	▲***
Cost of goods sold (COGS)	***	***	***	▲***	▼***	▲***
Gross profit or (loss) (fn2)	***	***	***	▲***	▼***	▲***
SG&A expenses	***	***	***	▼***	▼***	▲***
Operating income or (loss) (fn2)	***	***	***	▲***	▼***	▲***
Net income or (loss) (fn2)	***	***	***	▲***	▼***	▲***
Unit COGS	***	***	***	▲***	▲***	▲***
Unit SG&A expenses	***	***	***	▼***	▼***	▼***
Unit operating income or (loss) (fn2)	***	***	***	▲***	▼***	▲***
Unit net income or (loss) (fn2)	***	***	***	▲***	▼***	▲***
COGS/sales (fn1)	***	***	***	▼***	▲***	▼***
Operating income or (loss)/sales (fn1)	***	***	***	▲***	▼***	▲***
Net income or (loss)/sales (fn1)	***	***	***	▲***	▼***	▲***
Capital expenditures	***	***	***	▼***	▲***	▼***
Research and development expenses	***	***	***	▼***	▼***	▲***
Net assets	***	***	***	▼***	▼***	▲***

Note.--Shares and ratios shown as “0.0” percent represent non-zero values less than “0.05” percent (if positive) and greater than

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.

Source: Compiled from data submitted in response to Commission questionnaires. 508-compliant tables containing these data are contained in parts III, IV, VI, and VII of this report.

APPENDIX D

DETAILED CHANNELS OF DISTRIBUTION SHIPMENT DATA

Table D-1
NBR: U.S. producer's U.S. shipments by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Table D-2
NBR: U.S. importers' U.S. shipments of imports from France by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D-3
NBR: U.S. importers' U.S. shipments of imports from Mexico by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D-4
NBR: U.S. importers' U.S. shipments of imports from South Korea by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D-5
NBR: U.S. importers' U.S. shipments of imports from subject sources by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D-6
NBR: U.S. importers' U.S. shipments of imports from Japan by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table D-7
NBR: U.S. importers' U.S. shipments of imports from all other sources by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table D-8
NBR: U.S. importers' U.S. shipments of imports from nonsubject sources by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Table D-9
NBR: U.S. importers' U.S. shipments of imports from all import sources by channel of distribution and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Channel	Measure	2019	2020	2021
Distributors	Quantity	***	***	***
Custom mixers	Quantity	***	***	***
Other end users	Quantity	***	***	***
All channels	Quantity	***	***	***
Distributors	Value	***	***	***
Custom mixers	Value	***	***	***
Other end users	Value	***	***	***
All channels	Value	***	***	***
Distributors	Unit value	***	***	***
Custom mixers	Unit value	***	***	***
Other end users	Unit value	***	***	***
All channels	Unit value	***	***	***
Distributors	Share of quantity	***	***	***
Custom mixers	Share of quantity	***	***	***
Other end users	Share of quantity	***	***	***
All channels	Share of quantity	***	***	***
Distributors	Share of value	***	***	***
Custom mixers	Share of value	***	***	***
Other end users	Share of value	***	***	***
All channels	Share of value	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX E

PURCHASERS' DESCRIPTIONS REGARDING SUPPLY CONSTRAINTS

Table E-1
NBR: Purchasers' descriptions regarding supply constraints since January 1, 2019

Firm	Supply constraints before the petitions were filed	Supply constraints after the petitions were filed
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Table continued.

Table E-1 Continued
NBR: Purchasers' descriptions regarding supply constraints since January 1, 2019

Firm	Supply constraints before the petitions were filed	Supply constraints after the petitions were filed
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Table continued.

Table E-1 Continued
NBR: Purchasers' descriptions regarding supply constraints since January 1, 2019

Firm	Supply constraints before the petitions were filed	Supply constraints after the petitions were filed
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX F

OFFICIAL IMPORT STATISTICS

Table F-1
NBR: U.S. imports based on official statistics, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit values in dollars per pound

Source	Measure	2019	2020	2021
France	Quantity	30,202	25,182	33,924
Mexico	Quantity	17,651	14,312	12,258
South Korea	Quantity	30,147	19,336	33,419
Subject sources	Quantity	78,000	58,830	79,601
Japan	Quantity	26,785	20,449	19,887
All other sources	Quantity	11,389	6,646	10,346
Nonsubject sources	Quantity	38,175	27,095	30,233
All import sources	Quantity	116,174	85,926	109,834
France	Value	40,259	30,158	43,978
Mexico	Value	17,029	11,180	15,093
South Korea	Value	29,818	15,088	40,113
Subject sources	Value	87,106	56,425	99,185
Japan	Value	42,252	24,207	25,095
All other sources	Value	14,978	7,526	15,307
Nonsubject sources	Value	57,230	31,733	40,402
All import sources	Value	144,336	88,158	139,586
France	Unit value	1.33	1.20	1.30
Mexico	Unit value	0.96	0.78	1.23
South Korea	Unit value	0.99	0.78	1.20
Subject sources	Unit value	1.12	0.96	1.25
Japan	Unit value	1.58	1.18	1.26
All other sources	Unit value	1.32	1.13	1.48
Nonsubject sources	Unit value	1.50	1.17	1.34
All import sources	Unit value	1.24	1.03	1.27

Table continued.

Table F-1 Continued
NBR: U.S. imports based on official statistics, by source and period

Shares and ratios in percent; ratios represent the ratio to U.S. production

Source	Measure	2019	2020	2021
France	Share of quantity	26.0	29.3	30.9
Mexico	Share of quantity	15.2	16.7	11.2
South Korea	Share of quantity	25.9	22.5	30.4
Subject sources	Share of quantity	67.1	68.5	72.5
Japan	Share of quantity	23.1	23.8	18.1
All other sources	Share of quantity	9.8	7.7	9.4
Nonsubject sources	Share of quantity	32.9	31.5	27.5
All import sources	Share of quantity	100.0	100.0	100.0
France	Share of value	27.9	34.2	31.5
Mexico	Share of value	11.8	12.7	10.8
South Korea	Share of value	20.7	17.1	28.7
Subject sources	Share of value	60.3	64.0	71.1
Japan	Share of value	29.3	27.5	18.0
All other sources	Share of value	10.4	8.5	11.0
Nonsubject sources	Share of value	39.7	36.0	28.9
All import sources	Share of value	100.0	100.0	100.0
France	Ratio	***	***	***
Mexico	Ratio	***	***	***
South Korea	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Japan	Ratio	***	***	***
All other sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

Source: Data for are compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 4002.59.0000, accessed May 9, 2022. Imports are based on the imports for consumption and landed duty paid values data series. Other data are compiled from data submitted in response to Commission questionnaires.

APPENDIX G

NONSUBJECT COUNTRY PRICE DATA

One importer, ***, reported price data for imported product from Japan. It reported data for products 1-4. Price data reported by *** accounted for *** percent of U.S. commercial shipments of NBR from Japan in 2021. These price items and accompanying data are comparable to those presented in tables V-4 to V-7. Price and quantity data for Japan are shown in tables G-1 to G-4 and in figures G-1 to G-4 (with domestic and subject sources).

As shown in table G-5, in comparing nonsubject country pricing data with U.S. producer pricing data, it should be noted that ***. Prices for product imported from Japan were lower than prices for U.S.-produced product in 23 of 48 instances (*** pounds) and higher in 25 instances (*** pounds). Comparisons are highly product-specific, with these quarters reflecting higher-priced nonsubject product imported from Japan occurring across extremely low-volume quarters and products – ***.

Nonsubject prices for NBR imported from Japan were higher than prices of product imported from subject sources in the majority of quarters: 41 of 48 quarters when compared with product from France, 29 of 48 when comparing to Mexico, and 35 of 36 quarters when comparing to South Korea. For the comparisons to France and South Korea, a majority of the quantities of product imported from Japan were sold at a higher price (*** pounds of nonsubject NBR imported from Japan sold at a higher price than subject imports compared with *** pounds sold at a lower price when comparing to NBR imported from France, and *** pounds compared with less than *** pounds when comparing to South Korea). Comparing to product imported from Mexico, the majority of the product imported from Japan was priced lower (*** pounds compared with *** pounds).

Table G-1
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	Japan price	Japan quantity
2019 Q1	***	***	***	***
2019 Q2	***	***	***	***
2019 Q3	***	***	***	***
2019 Q4	***	***	***	***
2020 Q1	***	***	***	***
2020 Q2	***	***	***	***
2020 Q3	***	***	***	***
2020 Q4	***	***	***	***
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Table G-2
NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	Japan price	Japan quantity
2019 Q1	***	***	***	***
2019 Q2	***	***	***	***
2019 Q3	***	***	***	***
2019 Q4	***	***	***	***
2020 Q1	***	***	***	***
2020 Q2	***	***	***	***
2020 Q3	***	***	***	***
2020 Q4	***	***	***	***
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, ground/particulate/pellet form, sold in 20-30 kg bags.

Table G-3

NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	Japan price	Japan quantity
2019 Q1	***	***	***	***
2019 Q2	***	***	***	***
2019 Q3	***	***	***	***
2019 Q4	***	***	***	***
2020 Q1	***	***	***	***
2020 Q2	***	***	***	***
2020 Q3	***	***	***	***
2020 Q4	***	***	***	***
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: NBR with Acrylonitrile content greater than or equal to 26% (exclusive) and less than or equal to 31% (exclusive) or Acrylonitrile content greater than 35% (exclusive) and less than or equal to 41% (exclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Table G-4

NBR: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter

Quantity in 1,000 pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	Japan price	Japan quantity
2019 Q1	***	***	***	***
2019 Q2	***	***	***	***
2019 Q3	***	***	***	***
2019 Q4	***	***	***	***
2020 Q1	***	***	***	***
2020 Q2	***	***	***	***
2020 Q3	***	***	***	***
2020 Q4	***	***	***	***
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: NBR with Acrylonitrile content less than 26% (inclusive) or Acrylonitrile content greater than 41% (inclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Figure G-1
NBR: Weighted-average prices and quantities of domestic and imported product 1, by quarter

Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Figure G-2
NBR: Weighted-average prices and quantities of domestic and imported product 2, by quarter

Price of product 2

* * * * * * *

Volume of product 2

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: NBR with Acrylonitrile content greater than or equal to 31% (inclusive) and less than or equal to 35% (inclusive) and Mooney Viscosity of 30 to 80, without any third monomer, ground/particulate/pellet form, sold in 20-30 kg bags.

Figure G-3
NBR: Weighted-average prices and quantities of domestic and imported product 3, by quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: NBR with Acrylonitrile content greater than or equal to 26% (exclusive) and less than or equal to 31% (exclusive) or Acrylonitrile content greater than 35% (exclusive) and less than or equal to 41% (exclusive), and Mooney Viscosity of 30 to 80, without any third monomer, sold in bales or slabs ranging from 25-45 kgs.

Figure G-4
NBR: Weighted-average prices and quantities of domestic and imported product 4, by quarter

Price of product 4

* * * * * * *

Volume of product 4

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: Specialty NBR with Acrylonitrile content less than 26% or greater than 41%; Hot Polymerized, and/or containing methacrylic acid, ground/particulate/pellet form, sold in 20-30 kg bags.

Table G-5
NBR: Summary of higher/lower prices, by source, January 2019-December 2021

Quantity in 1,000 pounds

Nonsubject source	Comparison source	Number of quarters nonsubject lower	Quantity of nonsubject lower	Number of quarters nonsubject higher	Quantity of nonsubject higher
Japan	United States	23	***	25	***
Japan	France	7	***	41	***
Japan	Mexico	19	***	29	***
Japan	South Korea	1	***	35	***

Source: Compiled from data submitted in response to Commission questionnaires.