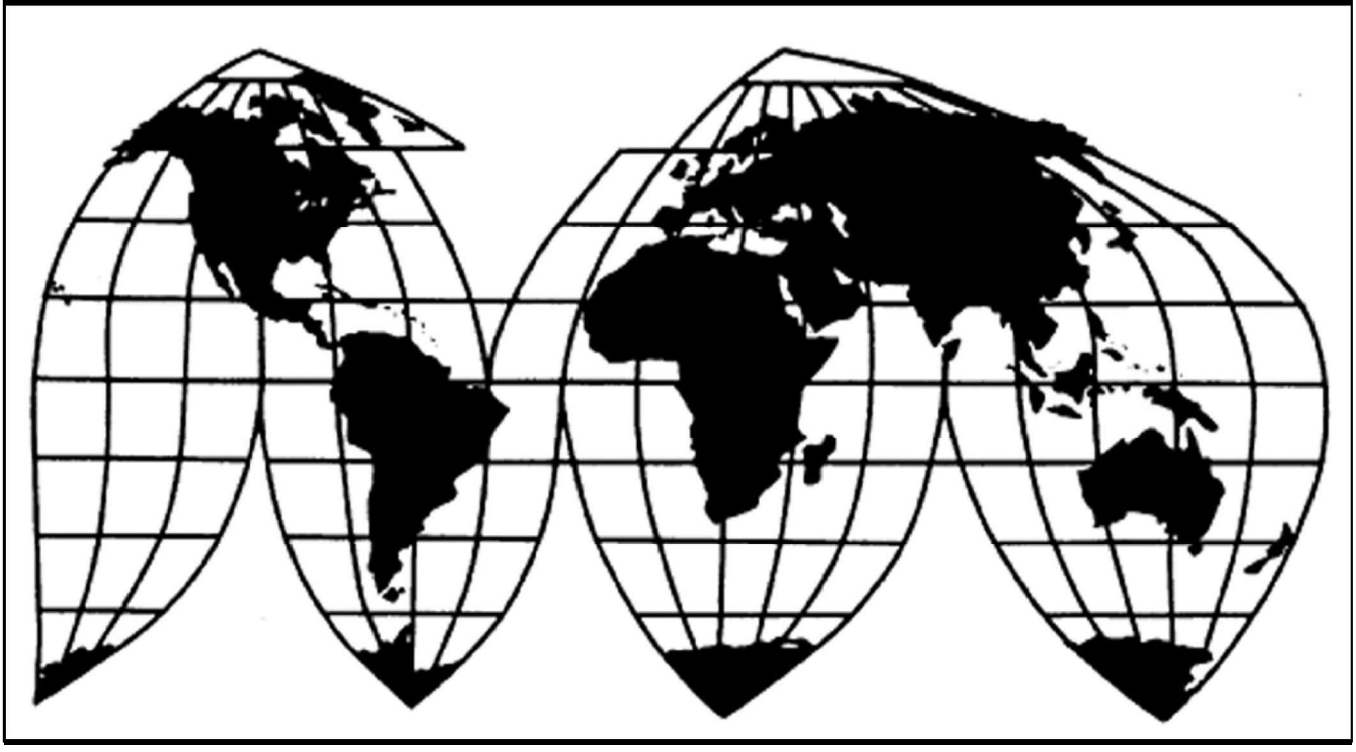
Acrylonitrile-Butadiene Rubber (NBR) from France, Korea, and Mexico

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

Publication 5227 **August 2021**

U.S. International Trade Commission



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Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

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Note.—Information that would reveal confidential operations of individual concerns may not be published.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 (Preliminary)

Acrylonitrile-butadiene rubber from France, Korea, and Mexico

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 there is a reasonable indication that an industry in the United States is materially injured by reason of imports of acrylonitrile-butadiene rubber from France, Korea, and Mexico, provided for in subheading 4002.51.00 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV").[2]

COMMENCEMENT OF FINAL PHASE INVESTIGATIONS

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in section 207.21 of the Commission's rules, upon notice from the U.S. Department of Commerce ("Commerce") of affirmative preliminary determinations in the investigations under § 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under § 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

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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] 86 FR 40192 (July 27, 2021).

BACKGROUND

On June 30, 2021, Zeon Chemicals L.P. and Zeon GP, LLC (collectively "Zeon"), Louisville, Kentucky, filed petitions with the Commission and Commerce, alleging that an industry in the United States is materially injured and threatened by further material injury by reason of LTFV imports of acrylonitrile-butadiene rubber from France, Korea, and Mexico. Accordingly, effective June 30, 2021, the Commission instituted antidumping duty investigations Nos. 731-TA-1567-1569 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference 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 July 7, 2021 (86 FR 35825). In light of the restrictions on access to the Commission building due to the COVID–19 pandemic, the Commission conducted its conference through written testimony and video conference. All persons who requested the opportunity were permitted to participate.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of acrylonitrile-butadiene rubber from France, Korea, and Mexico that are allegedly sold in the United States at less than fair value.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

Zeon Chemicals L.P. and Zeon GP, LLC (collectively "Zeon" or "Petitioner"), a domestic producer of acrylonitrile-butadiene rubber ("NBR"), filed the petitions in these investigations on June 30, 2021. Petitioner appeared at the staff conference and submitted a postconference brief.[3]

Several respondent entities participated in these investigations: 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

[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States, 2*0 CIT 353, 354-55 (1996). No party argues that the establishment of an industry in the United States is materially retarded by the allegedly unfairly traded imports.

[2] *American Lamb Co*., 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

[3] In light of the restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted its conference by video conference held on July 21, 2021, as set forth in procedures provided to the parties on July 12, 2021. Conference Transcript ("Conf. Tr.") at 4-5 (Haines).

producer and exporter of NBR in 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. Kumho and Negromex appeared at the conference and submitted postconference briefs. Arlanxeo did not appear at the conference but submitted a postconference brief.

Data Coverage. U.S. industry data are based on the questionnaire response of one firm that accounted for 100 percent of U.S. production of NBR in 2020.[4] U.S. import data are based on official Commerce import statistics and questionnaire responses from 16 U.S. importers, which are estimated to account for *** percent of subject imports from France, *** of subject imports from Korea, and *** percent of subject imports from Mexico in 2020.[5] The Commission received responses to its questionnaires from three foreign producers of subject merchandise; one producer/exporter in France, accounting for approximately *** percent of U.S. imports of subject merchandise from France in 2020;[6] one producer/exporter in Korea, accounting for approximately *** percent of U.S. imports of subject merchandise from Korea in 2020;[7] and one producer/exporter in Mexico, accounting for approximately *** percent of U.S. imports of subject merchandise from Mexico in 2020.[8]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[9] 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."[10] In turn, the Tariff Act defines

[4] Confidential Report, Memorandum INV-TT-094 (Aug. 9, 2021) ("CR") at I-4; *Acrylonitrile-Butadiene Rubber (NBR) from France, Korea, and Mexico*, Inv. Nos. 731-TA-1567-1569 (Preliminary), USITC Pub. 5227 (Aug. 2021) ("PR") at I-4.

[5] CR/PR at IV-1. Data for U.S. imports presented in this report are based on adjusted official import statistics due to inconsistencies between import volumes reported in questionnaires and official import statistics. *Id*.

[6] CR/PR at VII-3.

[7] CR/PR at VII-9.

[8] CR/PR at VII-15.

[9] 19 U.S.C. § 1677(4)(A).

[10] 19 U.S.C. § 1677(4)(A).

"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."[11]

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.[12] 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."[13] The Commission then defines the domestic like product in light of the imported articles Commerce has identified.[14] 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.[15] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[16] The Commission looks for clear dividing lines among possible like products and disregards minor

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[11] 19 U.S.C. § 1677(10).

[12] 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).

[13] *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v. United States*, Case No. 19-1289, slip op. at 8-9 (Fed. Cir. Feb. 7, 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[14] *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).

[15] *See*, *e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department 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 Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) ("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).

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

variations.[17] The Commission may, where appropriate, include domestic articles in the domestic like product in addition to those described in the scope.[18]

In its notice of initiation, Commerce defined the imported merchandise within the scope of these investigations as follows:

> 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. 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 (e.g., nitrile rubber further compounded with fillers, reinforcement agents, vulcanization agents, etc.; by example, products classified under HTSUS subheading 4005); (b) AB Rubber containing rubber processing chemicals, AB Rubber containing other materials used for further processing beyond the polymerization process; (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.

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[17] *See*, *e.g.*, *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.").

[18] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895-96 (Final), USITC Pub. 3467 at 8 n.34 (Nov. 2001); *Torrington,* 747 F. Supp. at 748-49 (holding that the Commission is not legally required to limit the domestic like product to the product advocated by the petitioner, co-extensive with the scope).

> 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 investigations 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 1,3-butadiene ("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, as well as resistant to cuts, abrasion, tears, caustics, and aliphatic hydrocarbons. However, 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. Industrial hose, automotive, and the oil and gas industries are the most common uses.[22]

A. Arguments of the Parties

Petitioner's Argument. Petitioner argues that the Commission should define a single domestic like product, consisting of NBR, that is coextensive with the scope.[23]

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[19] *Acrylonitrile-Butadiene Rubber from France, the Republic of Korea, and Mexico: Initiation of Less-Than-Fair-Value Investigations*, 86 Fed. Reg. 40192 (July 27, 2021).

[20] CR/PR at I-7.

[21] With 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. Mooney viscosity is measured in terms of Mooney units. CR/PR at I-7 – I-8.

[22] CR/PR at I-8.

[23] Zeon Postconference Br. at 4. Zeon included a proposed revised scope, indicating that it intends to propose these revisions to Commerce. *Id.* at 18-19. As this revised scope has not yet been adopted by Commerce, the Commission must continue to rely on the scope as set forth in Commerce's initiation notice, described above. 19 U.S.C. § 1677(35)(C)(i).

Respondents' Argument.

Arlanxeo. Arlanxeo did not address the definition of the domestic like product.

Kumho. Kumho does not contest Petitioner's proposed definition of the domestic like product but reserves the right to do so in any final phase of these investigations.[24]

Negromex. Negromex argues that the petition is "fatally flawed" due to problems with the scope and asserts that the Commission should rescind its initiation pursuant to 19 U.S.C. § 1673a(c)(1)(A).[25] Negromex's arguments and reliance on this provision are misplaced. First, the definition of the scope is within the purview of Commerce, and the Commission does not have the authority to resolve issues pertaining to alleged flaws in the scope. Similarly, the Commission does not initiate the investigation.[26] The statutory provision relied on by Negromex provides no authority for the Commission to rescind the initiation of these investigations. Rather, it provides that "the administrating authority shall . . . determine whether the petition alleges the elements necessary. . . ." within 20 days after the date on which the petition is filed.[27]

B. Analysis

Based on the record, and in the absence of contrary party argument, we define a single domestic like product consisting of NBR coextensive with the scope in these investigations. As discussed below, the limited record in the preliminary phase of these investigations does not indicate that there are clear dividing lines among NBR products corresponding to the scope that would warrant defining separate domestic like products. The record in the preliminary phase, however, indicates that there are clear dividing lines between NBR corresponding to the scope and products that correspond to out-of-scope articles, namely Latex NBR and hydrogenated NBR ("HNBR").

Physical Characteristics and Uses. All NBR is a copolymer of the monomers acrylonitrile and butadiene. Further, all NBR is an intermediate product that is further compounded into articles for use in applications in which varying levels of oil and heat resistance are desired.[28] NBR is produced in various grades and is generally distinguished on the basis of ACN content, which impacts the product's oil, fuel, heat and abrasion resistances, and tensile strength, and

[24] Kumho Postconference Br. at 1 n.2.
[25] Negromex Postconference Br. at 2-6.
[26] 19 U.S.C. §§ 1673a(b) and (c).
[27] 19 U.S.C. § 1673a(c)(1)(A).
[28] CR/PR at I-7 – I-9.

Mooney viscosity, which impacts the product's processability. It is typically sold in the U.S. market in a range of product forms containing between 26 and 41 percent acrylonitrile, and between 30 and 80 Mooney units.[29] NBR is also produced in a variety of forms, including slab, particulate (crumb), pellet, powder, and liquid.[30] According to Zeon, in-scope XNBR is a subtype of NBR that uses the same polymerization as other forms of NBR but includes a low concentration methacrylic acid.[31] XNBR meets the same ASTM D2000 classifications as NBR and is produced and compounded the same way as NBR materials.[32] Responses to the Commission questionnaires were mixed in terms of the comparability of the physical characteristics of NBR and XNBR, with some ***.[33]

NBR is used in applications in which a moderate level of heat and oil or fuel resistance is required.[34] End use applications of NBR include hoses, air ducts, oil and gas components, construction insulation, adhesives, mats, wires and cables, rollers, seals O-rings, PVC modifications, belting, and food handling.[35] According to Zeon, XNBR is typically used in the same applications as NBR, although it may be preferred if greater abrasion resistance and improved tensile strength are desired in the finished article.[36] Thus, the limited record in the preliminary phase of these investigations indicates that all NBR corresponding to the scope shares the same physical characteristics and that there are not clear dividing lines in terms of end uses.

There appears to be a clear dividing line between NBR corresponding to the scope and out-of-scope HNBR. HNBR is chemically distinct from NBR as a result of the hydrogenation reaction, which results in the formation of an ethylene unit in the backbone polymer structure that other forms of NBR does not possess.[37] The ethylene portion of HNBR imparts properties that make it superior to other forms of NBR, including improved elasticity, heat resistance, mechanical strength, chemical resistance, and ozone resistance.[38] All firms responding to the

[29] CR/PR at I-7 – I-8.

[30] CR/PR at I-9; Zeon Postconference Br. at 8-9.

[31] Zeon Postconference Br. at 5-6.

[32] Zeon Postconference Br. at 6; Conf. Tr. at 19 (Saunders).

[33] CR/PR at Tables D-4 – D-6. Responses were provided by one U.S. producer and five U.S. importers. The U.S. producer reported that NBR and XNBR were *** comparable on all six like product factors.

[34] CR/PR at I-8.

[35] CR/PR at I-8; Zeon Postconference Br. at 6-7.

[36] CR/PR at I-8; Zeon Postconference Br. at 6; *see also* CR/PR at Tables D-5, D-6.

[37] Zeon Postconference Br. at 9-10; CR/PR at Tables D-2, D-3.

[38] Zeon Postconference Br. at 9-10; CR/PR at Tables D-2, D-3.

Commission questionnaires reported that HNBR and NBR only sometimes or never have comparable physical characteristics.[39] Although HNBR and NBR may have overlapping end uses, namely automotive belt applications, automotive seals, and oil and gas applications, market participants and industry standards ***.[40] Additionally, ***.[41]

Similarly, there appears to be a clear dividing line between NBR and Latex NBR.[42] Latex NBR in an unfinished form is used to produce NBR, which involves further processing and treatment involving coagulation, washing, and drying. Latex NBR can also undergo additional processing distinct from the process to produce NBR, including combining it with other chemicals such as ***. This results in two distinct physical forms: Latex NBR – a stable emulsion of polymer microparticles in an aqueous medium – and NBR – a solid form of rubber. Latex NBR in its finished form has distinct end uses from NBR, such as nitrile examination gloves, cosmetic puffs, and coatings.[43]

Manufacturing Facilities, Production Processes and Employees. All domestically produced NBR, regardless of ACN content and Mooney viscosity, is produced on common manufacturing equipment using common production employees and a batch process.[44] According to Zeon, production of XNBR is performed at the same facilities and on the same equipment as NBR. Zeon maintains that the manufacturing process for XNBR is the same as NBR, except for the addition of methacrylic acid in XNBR.[45] Three out of four importers reported that the manufacturing processes for NBR and XNBR were always or frequently comparable, and one ***.[46]

NBR, HNBR, and Latex NBR have common manufacturing facilities, production processes, and employees (at the early stages of production in the production of Latex NBR). As discussed above, NBR undergoes additional processing involving coagulation, washing, and drying.[47] The production process for HNBR requires additional hydrogenation, which according

[39] CR/PR at Table D-1.

[40] Zeon Postconference Br. at 9-10; CR/PR at Tables D-2, D-3.

[41] CR/PR at Tables D-2, D-3.

[42] Petitioner appears to use the term "Latex NBR" to refer to products at different stages of processing, *i.e.*, what appears to be an unfinished form and input for NBR as well as in a finished form that has undergone additional processing distinct from the process used to produce NBR. Zeon Postconference Br. at 10-12; Conf. Tr. at 50-51 (Cail).

[43] Zeon Postconference Br. 10-12.

[44] CR/PR at I-9 – I-14.

[45] Zeon Postconference Br. at 15.

[46] CR/PR at D-4 – D-6.

[47] Zeon Postconference Br. at 10-12, 15-17.

to Zeon is a complex, separate, and unique process that takes place in a separate facility.[48] Questionnaire responses were mixed in terms of the comparability of the manufacturing processes of HNBR and NBR.[49] As described above, Latex NBR can also undergo additional processing distinct from the process to produce NBR, including combining it with other chemicals such as ***.[50]

Channels of Distribution. During the period of investigation ("POI"), *** domestically produced NBR was sold directly to end users, with *** sold to custom mixers.[51] According to Zeon, HNBR and Latex NBR are sold through comparable channels of distribution.[52] Questionnaire responses were mixed in terms of the comparability of the channels of distribution for HNBR and NBR.[53] Three out of four importers reported that channels of distribution were always or frequently comparable for NBR and XNBR.[54]

Interchangeability. According to Zeon, all NBR products of equivalent ACN content, Mooney viscosity, and form are interchangeable.[55] Responses to Commission questionnaires regarding the interchangeability between NBR and XNBR were mixed, with some ***.[56]

As described above, the additional processing that HNBR undergoes imparts greater heat resistance, better oil resistance, and higher toughness compared to NBR. Accordingly, NBR cannot be used interchangeably in end use applications requiring these properties; ***.[57] All firms responding to the Commission questionnaires reported that HNBR and NBR are *** interchangeable.[58]

Latex NBR in both its unfinished form, which is used to produce NBR, and in its finished form, cannot be used interchangeably with NBR.

Producer and Customer Perceptions. According to Zeon, customers purchase NBR with varying degrees of ACN content depending on the specific chemical resistance and flexibility

[48] Zeon Postconference Br. at 10-12, 15-17; CR/PR at Tables D-2, D-3; Conf. Tr. at 17 (Saunders).
[49] CR/PR at Table D-1.
[50] Zeon Postconference Br. at 10-12, 15-17.
[51] CR/PR at Table II-1.
[52] Zeon Postconference Br. at 15; *see also* CR/PR at Tables D-2, D-3.
[53] CR/PR at Table D-1.
[54] CR/PR at D-4 – D-6.
[55] Zeon Postconference Br. at 13
[56] CR/PR at I-14 – I-15, App. D.
[57] CR/PR at Tables D-2, D-3.
[58] CR/PR at Table D-1.

needed.[59] Responses to Commission questionnaires regarding the perceptions between NBR and XNBR were mixed, with ***.[60]

The record indicates that producers and customers perceive NBR, Latex NBR, and HNBR to be distinct products.[61]

Price. According to Zeon, prices for NBR vary based on market demand for certain NBR grades, public monomer price indices, and the producer's conversion costs; it reports that ***.[62] Responses to Commission questionnaires regarding the price of NBR and XNBR were mixed, with ***.[63]

The record indicates that HNBR is priced *** than NBR.[64] All responding firms reported that HNBR and NBR are *** comparable in terms of price.[65] The record also indicates that Latex NBR is priced *** than NBR.[66]

Conclusion. 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. Although differences in various forms and variances in the ACN content and Mooney viscosity may affect the physical properties of NBR and by extension the desirability of a particular type or grade of NBR for certain end uses as well as the price, the record suggests that customers and producers generally perceive all NBR products corresponding to the scope as comprising a single product category with varying chemical resistances and processability. Although questionnaire responses among U.S. importers were mixed regarding the comparability of NBR and XNBR, the record at this stage does not indicate a clear dividing line between the two that would warrant defining separate domestic like products. The record in the preliminary phase of these investigations, however, indicates clear dividing lines between NBR and either Latex NBR and HNBR, in terms of physical characteristics and end uses, interchangeability producer and customer perceptions, and price.

[59] Zeon Postconference Br. at 17 (*citing Nitrile Rubber from Japan*, Inv. No. 731-TA-384 (Final), USITC Pub. 2090 (June 1988) at 5-6).

[60] CR/PR at I-14 – I-15, App. D.

[61] CR/PR at Tables D-1 – D-3.

[62] Zeon Postconference Br. at 17-18.

[63] CR/PR at I-14 – I-15, App. D.

[64] CR/PR at Tables D-2, D-3; Zeon Postconference Br. at 18.

[65] CR/PR at Table D-1.

[66] Zeon Postconference Br. at 18.

Thus, in view of the foregoing, and in the absence of any party argument to the contrary, we define a single domestic like product coextensive with the scope of these investigations for purposes of our preliminary determinations.[67]

IV. 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."[68] 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.

Petitioner argues that Zeon is the sole domestic producer of NBR. It also claims that there are no related party issues in these investigations.[69] Respondents take no position with respect to the definition of the domestic industry for purposes of the preliminary phase of these investigations.[70]

These investigations raise no domestic industry issues at the preliminary phase.[71] In light of our domestic like product definition, we define a single domestic industry consisting of all U.S. producers of NBR, namely Zeon.

V. Negligible Imports

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 3 percent of

[67] To the extent that any party wishes to propose different definitions of the domestic like product in any final phase of these investigations, we invite them to comment with specificity as to proposed definition and data collection on the draft questionnaires, pursuant to 19 C.F.R. § 207.20(b).

[68] 19 U.S.C. § 1677(4)(A).

[69] Zeon Postconference Br. at 19-20.

[70] Kumho, the only respondent to address domestic industry issues in its postconference brief, submits that it "understands that Zeon is the only producer of NBR in the United States" and, as it does not import NBR from any of the subject countries, is not a related party. Kumho Postconference Br., Exh. 1, Responses to Commission Staff Questions, at 3-4.

[71] Zeon ***. CR/PR at III-3 n.4. No party argues that *** should be included in the domestic industry, and the limited record in this preliminary phase of these investigations does not contain sufficient information to assess whether ***.

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 be deemed negligible.[72]

During the most recent 12-month period preceding the filing of the petitions in these investigations (June 2020 through May 2021), imports from France accounted for 31.9 percent of total imports, imports from Korea accounted for 28.3 percent of total imports, and imports from Mexico accounted for 16.0 percent of total imports.[73] Because imports from each subject country are above the statutory threshold, we find that subject imports from each country are not negligible.[74]

VI. Cumulation

For purposes of evaluating the volume and effects for a determination of reasonable indication 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

[72] 19 U.S.C. §§ 1673b(a), 1677(24)(A)(i).

[73] CR/PR at Table IV-4.

[74] No party disputes that imports from each subject source are above the negligibility threshold. *See, e.g.,* Kumho Postconference Br., Responses to Staff Questions at 4.

(4) whether the subject imports are simultaneously present in the market.[75]

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 determining whether the subject imports compete with each other and with the domestic like product.[76] Only a "reasonable overlap" of competition is required.[77]

A. Arguments of the Parties

Zeon argues that imports from each subject source should be cumulated.[78] No respondent parties contest cumulation.

B. Analysis

We consider subject imports from France, Korea, and Mexico 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.[79] There also is a reasonable overlap of competition between subject imports from France, Korea, and Mexico, and between subject imports from each source and the domestic like product, as discussed below.

Fungibility. In 2020, NBR from the domestic producer and all subject sources were sold in overlapping ACN content, with the largest volume of NBR sold from all sources being in the range of 26 to 41 percent ACN.[80] During that time, NBR from the domestic producer and all subject sources were also sold with ACN content below 26 percent, and NBR from all sources except *** was sold with ACN content above 41 percent.[81] Domestic NBR and subject imports

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[75] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-80 (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).

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

[77] 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*, 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.").

[78] Petition at 25-26.

[79] None of the statutory exceptions to cumulation applies.

[80] CR/PR at Table IV-5.

[81] CR/PR at Table IV-5.

were also sold in overlapping forms. The largest volume of U.S. shipments of NBR in 2020 from the domestic producer and subject sources was in the bale/slab form.[82] Smaller quantities of NBR in ground/powder form from the *** and from *** and *** were shipped during that time; there were no reported shipments of NBR from *** in ground/powder form.[83] Only *** reported U.S. shipments of NBR in liquid form in 2020.[84] The *** reported that NBR from each subject source are always or frequently interchangeable with each other as well as the domestic like product.[85]

Channels of Distribution. The domestic like product and imports from each subject source are sold in overlapping channels of distribution, namely to custom mixers and end users, although *** are reportedly sold through distributors.[86]

Geographic Overlap. *** responding importers of subject merchandise from each subject source reported selling NBR to all contiguous regions in the United States.[87]

Simultaneous Presence in Market. NBR from *** from each subject source were present in the U.S. market throughout the entire POI.[88]

Conclusion. Because the relevant antidumping duty petitions were filed on the same day, and 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 consequently analyze subject imports from France, Korea, and Mexico on a cumulated basis for analyzing material injury by reason of subject imports.

VII. Reasonable Indication of Material Injury by Reason of Subject Imports

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under

[82] CR/PR at Table IV-6.
[83] CR/PR at Table IV-6.
[84] CR/PR at Table IV-6.
[85] CR/PR at Tables II-8, II-9.
[86] CR/PR at Table II-1; Petition at 22.
[87] CR/PR at Table II-2.
[88] CR/PR at Tables IV-8, V-3 – V-5.

investigation.[89] 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.[90] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[91] In assessing whether there is a reasonable indication that 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.[92] 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."[93]

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[94] 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.[95] In identifying a 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

[89] 19 U.S.C. §§ 1671b(a), 1673b(a).

[90] 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).

[91] 19 U.S.C. § 1677(7)(A).

[92] 19 U.S.C. § 1677(7)(C)(iii).

[93] 19 U.S.C. § 1677(7)(C)(iii).

[94] 19 U.S.C. §§ 1671b(a), 1673b(a).

[95] *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).

subject imports and material injury.[96]

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.[97] In performing its examination, however, the Commission need not isolate

[96] 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).

[97] SAA at 851-52 ("{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.[98] 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.[99] It is clear that the existence of injury caused by other factors does not compel a negative determination.[100]

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."[101] 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

[98] 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.").

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

[100] *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.").

[101] *Mittal Steel*, 542 F.3d at 876, 878; *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." [102] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[103]

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.[104] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[105]

B. Conditions of Competition and the Business Cycle[106]

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

1. Demand Conditions

U.S. demand for NBR depends on U.S. demand for downstream products that incorporate NBR, such as hoses, walk-off mats, compounds, polyvinyl chloride, belts, wire, and cables. NBR accounts for between 10 and 50 percent of the cost of these products.[107] The parties generally agree that demand for NBR declined prior to the COVID-19 pandemic,[108] although Zeon characterizes this decline as "modest."[109] The parties also agree that the COVID-

[102] *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.

[103] *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.").

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

[105] *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.").

[106] The record indicates that Zeon internally consumed NBR to produce ***. CR/PR at III-7. We thus considered the applicability of the statutory captive production provision. We found that the threshold criterion for the application of the provision was 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.

[107] CR/PR at II-6.

[108] Zeon Postconference Br. at 22; Kumho Postconference Br. at 6-8; Negromex Postconference Br. 6-7.

[109] Zeon Postconference Br. at 22.

19 pandemic exacerbated declining demand in certain sectors, particularly the automotive and oil and gas sectors owing to the ensuing slowdown to travel and transportation activities.[110]

*** three importers (including ***) reported that U.S. demand declined during the POI, whereas a plurality of importers reported that demand fluctuated during the POI.[111] The available information indicates that apparent U.S. consumption of NBR declined from *** pounds in 2018 to *** pounds in 2019 and *** pounds in 2020, an overall decline of *** percent.[112]

2. Supply Conditions

Zeon is the sole U.S. producer of NBR. It accounted for a smaller share of the U.S. NBR market than either subject or nonsubject imports during the POI. Zeon's share of apparent U.S. consumption by quantity fluctuated but increased overall from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[113] Zeon's production capacity, which increased from *** pounds in 2018 to *** pounds in 2019 and 2020 following ***,[114] was less than apparent U.S. consumption during the POI.[115] Zeon reports that it experienced no disruptions to its ability to domestically produce NBR despite the pandemic, although it reported a supply disruption caused by scheduled maintenance to its parent company's production facilities in Japan in 2018, which constrained it from supplying certain NBR materials to the U.S. market.[116]

Subject imports accounted for the largest share of the U.S. NBR market during the POI. Cumulated subject import volumes declined during each full year of the POI.[117] Their share of

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[110] Conf. Tr. at 45 (Cail), 144 (Quintero); Arlanxeo Postconference Br. at 10-11; Kumho Postconference Br. at 6-8. Respondents also identified walk-off mats, which are used in manufacturing plants, restaurants, and casinos, as another sector impacted by the pandemic. Conf. Tr. at 143 (Kendler), 144 (Quintero).

[111] CR/PR at II-7 and Table II-4.

[112] CR/PR at Tables IV-9, C-1. Apparent U.S. consumption of NBR was *** pounds in interim 2020 and lower, at *** pounds, in interim 2021. *Id*.

Between 2018 and 2019, apparent U.S. consumption declined by *** percent, whereas between 2019 and 2020, it declined by *** percent. *Id*. This steeper decline in apparent U.S. consumption in the latter period coincides with the onset of the COVID-19 pandemic.

[113] CR/PR at Tables IV-10, C-1. Thus, the domestic industry's share of apparent U.S. consumption increased *** percentage points from 2018 to 2020. *Id*. Zeon's share of apparent U.S. consumption was *** percent in interim 2020 and higher, at *** percent, in interim 2021. *Id*.

[114] CR/PR at Table III-3.

[115] *Compare* CR/PR at Table III-4 *with* Table IV-9.

[116] CR/PR at II-5; Conf. Tr. at 72-74 (Cail).

[117] CR/PR at Tables IV-2, C-1. The quantity of subject imports was higher in interim 2021, at *** pounds, compared to interim 2020, at *** pounds. *Id*.

apparent U.S. consumption by quantity increased from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[118]

Nonsubject imports accounted for the second largest share of the U.S. NBR market during the POI. Nonsubject imports' share of apparent U.S. consumption declined from *** percent in 2018 and 2019 to *** percent in 2020.[119] Zeon's NBR imports from nonsubject sources accounted for *** percent of 2020 imports from nonsubject sources,[120] and Japan was the largest source of nonsubject imports during the POI.[121]

3. Substitutability and Other Conditions

We find that the record in the preliminary phase of these investigations indicates that there is a moderately high degree of substitutability between cumulated subject imports and domestic products, particularly within product types of overlapping ACN content, Mooney units, and form.[122] As discussed above, *** reported that the domestic product is always or frequently interchangeable with product from each of the subject countries.[123]

We also find price to be an important factor in purchasing decisions. Price was the factor purchasers responding to the lost sales/lost revenue survey identified most frequently as among their top three purchasing factors. However, purchasers reported technical

[118] CR/PR at Table IV-10. Thus, subject imports' share of apparent U.S. consumption increased by *** percentage points from 2018 to 2020. Cumulated subject imports' share of apparent U.S. consumption was *** percent in interim 2020 and higher, at *** percent, in interim 2021. *Id*.

[119] CR/PR at Table IV-10. Accordingly, nonsubject import's share of apparent U.S. consumption decreased by *** percentage points from 2018 to 2020. Nonsubject imports' share of apparent U.S. consumption was *** percent in interim 2020 and lower, at *** percent, in interim 2021. *Id*.

[120] *Derived from* Zeon Importer questionnaire, at question II-8a and table IV-2.

[121] CR/PR at II-5. Zeon imports from ***, Zeon Importer questionnaire, at questions I-3 and II-8a. *See also* Zeon's Postconference Br. at 28 (asserting that "Zeon's overriding and primary objective for its sales of NBR to the domestic market is to maximize profit at its Louisville, KY factory."); *Id*. at 29 ("The only times where Zeon may import NBR from Japan for sales in the US is where: (a) the price that the US customer is willing to pay makes the grade(s) unprofitable to produce in Zeon's Louisville, KY plant in the long-run (and there are no countervailing customer retention considerations), (b) the volume of the grade(s) is beyond the capability of the Louisville facility over a prolonged time period; (c) prohibitive regulatory restrictions exist; or (d) due to business continuity planning in event of unplanned disruptions to production.").

[122] CR/PR at II-11 – II-12.

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

specifications, quality, reliability, and availability more frequently as their first or second top purchasing factors.[124]

Zeon produces NBR using a batch process, whereas the respondent firms primarily or exclusively operate a continuous process.[125] In a prior investigation of the U.S. NBR market, the Commission found that the batch process is better suited to shorter runs and the production of more specialized and custom grades of NBR materials, whereas the continuous process is better suited to long production runs and, therefore, production of the higher sales volume, commodity grades of NBR materials.[126]

NBR is primarily sold from inventory, with lead times averaging *** days for Zeon and *** days for importers of the subject product.[127] Domestically produced NBR is sold on a ***.[128] Most commercial shipments of domestically produced NBR are sold ***, with the remainder sold through ***.[129] A majority (12 of 14) of responding importers reported selling subject imports on a transaction-by-transaction basis, followed by contracts (six), other methods (four), and price lists (two).[130] A large share of subject imports were sold in the spot market, with the remainder sold through annual and long-term contracts.[131]

The main raw materials used to produce NBR are acrylonitrile and butadiene. Raw materials, as a share of cost of goods sold ("COGS"), declined from *** percent in 2018 to *** percent in 2020.[132] Acrylonitrile and butadiene prices increased during 2018, declined in 2019 and through mid-2020, and increased to period highs in March 2021.[133]

[124] CR/PR at Table II-7. *** purchasers identified price/cost as their most important purchasing factor, and only *** purchaser identified price/cost as its second-most important purchasing factor. *Id*.

[125] CR/PR at I-13 – I-14, II-1. Zeon Corporation operates a continuous process to produce nonsubject NBR from Japan. Conf. Tr. at 39 (Recchio).

[126] *Nitrile Rubber from Korea*, Inv. No. 731-TA-827 (Preliminary), USITC Pub. 3210 (July 1999) at 6 n.28.

[127] CR/PR at II-12.

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

[129] CR/PR at Table V-3.

[130] CR/PR at Table V-2.

[131] CR/PR at Table V-3.

[132] CR/PR at V-1.

[133] CR/PR at Figure V-1 and Table V-1.

As of September 24, 2018, 10 percent *ad valorem* duties were imposed on imports of NBR produced in China under Section 301 of the Trade Act of 1974 ("Section 301 tariffs").[134] Such Section 301 tariffs were increased to 25 percent *ad valorem* as of May 10, 2019.[135]

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."[136]

Cumulated subject imports had a sizable, albeit declining, presence in the U.S. market from 2018 to 2020. Cumulated subject imports declined from 82.6 million pounds in 2018, to 78.0 million pounds in 2019, and 58.8 million pounds in 2020, an overall decline of 28.8 percent.[137] As discussed above, cumulated subject imports' share of apparent U.S. consumption by quantity increased in each year of the POI, from *** percent in 2018, to *** percent in 2019, and *** percent in 2020, an overall increase of *** percentage points.[138]

Based on the foregoing, we find that the cumulated subject import volume absolutely and relative to apparent U.S. consumption is significant.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of 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

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[134] 19 U.S.C. § 2411. *See* 83 Fed. Reg. 47,974 (Sept. 21, 2018).

[135] CR/PR at I-6 – I-7; *Notice of Modification of Section 301 Action*, 84 Fed. Reg. 20,459 (May 9, 2019).

[136] 19 U.S.C. § 1677(7)(C)(i).

[137] CR/PR at Tables IV-2, C-1. Cumulated subject import volume was 17.6 million pounds in interim 2020 and 20.7 million pounds in interim 2021. *Id*.

Between 2018 and 2019, cumulated subject import volume declined by 5.7 percent, whereas between 2019 and 2020, it declined by 24.6 percent. *Id*. We note that the 24.6 percent decline in subject import volume in the latter period, which coincided with the onset of the COVID-19 pandemic, is *** the *** percent rate at which apparent U.S. consumption declined. *Compare* CR/PR at Table IV-2 *with* Table IV-9; *accord* Table C-1.

[138] CR/PR at Table C-1. Cumulated subject imports' share of apparent U.S. consumption was *** percent in interim 2020 and *** percent in interim 2021. *Id*.

(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.[139]

As discussed above, we find there to be a moderately high degree of substitutability between the domestic like product and cumulated subject imports and that price is an important consideration in purchasing decisions, among other factors.

The Commission requested the U.S. producer and importers to provide quarterly data for the total quantity and f.o.b. value of four pricing products that were sold to unrelated U.S. customers during the first quarter of 2018 through the first quarter of 2021.[140] Zeon and seven importers provided usable pricing data for sales of the requested products, although not all firms reported pricing data for all products for all quarters.[141] There were no reported data for subject imports for pricing product 4.[142] Pricing data reported by these firms accounted for *** of the U.S. producer's commercial shipments of NBR during the period of investigation, *** percent of U.S. commercial shipments of subject imports from France, *** percent of U.S. commercial shipments of subject imports from Korea, and *** of U.S. commercial shipments of subject imports from Mexico.[143]

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[139] 19 U.S.C. § 1677(7)(C)(ii).

[140] CR/PR at V-6. The four pricing products were as follows:

Product 1.—Commodity NBR with Acrylonitrile content ranging from 26 percent to 41 percent and Mooney Viscosity of 30 to 80, sold in bales or slabs ranging from 25-45 kgs;

Product 2.—Specialty NBR with Acrylonitrile content less than 26 percent or greater than 41 percent; Hot Polymerized, and/or containing methacrylic acid, sold in bales or slabs ranging from 25-45 kgs;

Product 3.— Commodity NBR with Acrylonitrile content ranging from 26 percent to 41 percent and Mooney Viscosity of 30 to 80, ground/particulate/pellet form, sold in 20-30 kg bags; and

Product 4.— Specialty NBR with Acrylonitrile content less than 26 percent or greater than 41 percent; Hot Polymerized, and/or containing methacrylic acid, ground/particulate/pellet form, sold in 20-30 kg bags.

Id. Respondents have raised concerns regarding these pricing products. *See, e.g.,* Kumho Postconference Br. at 30-34, Response to Staff Questions at 6. We invite the parties in comments on draft questionnaires in any final phase of these investigations to propose specific alternate pricing products that would enable apples-to-apples comparisons of the domestic like product and subject imports.

[141] CR/PR at V-6.

[142] CR/PR at Table V-7.

[143] CR/PR at V-6.

According to these pricing data, cumulated subject imports undersold the domestic like product in 72 out of 98 possible quarterly comparisons involving *** pounds of NBR, at margins ranging from *** to *** percent and averaging *** percent.[144] For pricing product 1, which accounted for the greatest volume of sales of the domestic like product and subject imports, subject imports undersold the domestic like product in every possible comparison.[145] Subject imports oversold the domestic like product in the remaining 26 comparisons involving *** pounds of NBR, at margins ranging from *** to *** percent and averaging *** percent.[146]

We have also considered purchasers' responses to the lost sales allegations. Six out of 11 responding purchasers reported that, since 2018, they purchased subject imports instead of U.S.-produced product. Four of these purchasers reported that subject import prices were lower than U.S.-produced product. One of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product, although it ***. This purchaser estimated that it purchased *** pounds of NBR imported from subject sources instead of domestic NBR.[147]

Based on the evidence available in the preliminary phase of these investigations, we find that cumulated subject imports significantly undersold the domestic like product for purposes of our preliminary determinations.

We have also examined available data on price trends. While U.S. prices fluctuated, in general they decreased during January 2018 through March 2021 for each of the four pricing products, as did cumulated subject import prices on pricing products 1 and 3.[148] For pricing products 1, 2, and 3, domestic prices decreased irregularly from the first quarter of 2018 through the fourth quarter of 2019, generally fluctuated in 2020, and increased in the first quarter of 2021, but remained below 2018 levels.[149] With respect to cumulated subject imports, for pricing products 1 and 3, prices decreased irregularly from the first quarter of 2018 through mid-2020, and then generally fluctuated at levels below those seen in 2018.[150] For

[144] CR/PR at Tables V-9, V-10.
[145] CR/PR at Table V-4.
[146] CR/PR at Tables V-11, V-12.
[147] CR/PR at V-18 – V-20 & Table V-14.
[148] CR/PR at Table V-8.
[149] CR/PR at Tables V-4 – V-6. For pricing product 4, domestic prices increased irregularly from the first quarter of 2018 through the second quarter of 2019, fluctuated and then generally declined after the second quarter of 2020. CR/PR at Table V-7. As noted above, there were no reported data for subject imports for pricing product 4.
[150] CR/PR at Tables V-4 – V-6.

pricing product 2, cumulated subject import prices fluctuated, generally decreasing through late 2019 and increasing to levels higher than 2018 in 2021.[151] Domestic price decreases ranged from *** percent to *** percent during the period examined, while subject import price decreases ranged from *** percent to *** percent.[152] We have also considered purchasers' responses to the lost revenue allegations. Two out of ten responding purchasers reported that the domestic producer reduced prices to compete with lower priced subject imports, with *** reporting a price reduction of *** percent.[153]

While there appear to be multiple factors contributing to the downward pressure on U.S. prices during the POI, including the substantial decline in apparent U.S. consumption and declines in raw material prices,[154] for purposes of our preliminary determinations, we cannot rule out that cumulated subject imports, which significantly undersold the domestic like product, depressed prices for the domestic like product to a significant degree.

We have also considered whether cumulated subject imports prevented price increases that would have otherwise occurred to a significant degree. From 2018 to 2020, the domestic industry's unit raw material costs declined by *** percent, while unit net sales value declined by *** percent.[155] While raw material costs declined, unit COGS increased from $*** in 2018 to $*** in 2019 and then to $*** in 2020, partially as a result of a steady to declining total COGS spread over a smaller volume of sales as apparent U.S consumption declined over the POI.[156] This resulted in an increase of Zeon's ratio of COGS to net sales from *** percent in 2018 to *** percent in 2019 and to *** percent in 2020.[157]

Based on the record in the preliminary phase of these investigations, we find that cumulated subject imports significantly undersold the domestic like product, and we cannot

[151] CR/PR at Tables V-4 – V-6.

[152] CR/PR at V-15 & Table V-8.

[153] CR/PR at Table V-16.

[154] *See* CR/PR at Tables IV-9, C-1 (consumption data); CR/PR at Fig. V-1 and Table V-1 (raw material prices).

[155] CR/PR at Tables VI-1, C-1.

[156] The increasing ratio of COGS to net sales was not the result of rising total COGS. During the POI, total COGS remained at $*** million in 2018 and 2019 while the net sales volume fell from *** million pounds to *** million pounds. From 2019 to 2020, falling raw material costs drove total COGS down from $*** million to $*** million despite some increases in direct labor costs and other factory costs. Between these two years, net sales volume fell again from *** million pounds to *** million pounds. CR/PR at Tables C-1 and VI-1.

[157] CR/PR at Table C-1. Thus, the domestic industry's ratio of COGS to net sales increased by *** percentage points from 2018 to 2019. *Id*. Zeon's ratio of COGS to net sales was *** percent in interim 2020 and *** percent in interim 2021. *Id.*

conclude that cumulated subject imports did not depress prices for the domestic like product to a significant degree. Therefore, for purposes of our preliminary determinations, we find that subject imports had significant price effects. In any final phase investigations, we will further examine the price effects of subject imports, as well as other factors that may have affected prices.

E. Impact of the Subject Imports[158]

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry." 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 debt, research and development ("R&D"), and factors affecting domestic prices. 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."[159]

Many of Zeon's performance indicators declined from 2018 to 2020.[160] As discussed above, Zeon increased its capacity during the period of investigation from *** pounds in 2018 to *** pounds in 2019 and 2020.[161] Zeon's production declined from *** pounds in 2018 to *** pounds in 2019 and to *** pounds in 2020.[162] As a result, Zeon's capacity utilization

[158] In its notice initiating the antidumping duty investigations on NBR from France, Korea, and Mexico, Commerce reported estimated dumping margins of 41.73 percent for imports of subject merchandise from France, 105.38 percent for imports from Korea, and 92.70 percent for imports from Mexico. 86 Fed. Reg. 40192.

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

[160] We recognize that, as discussed below, many of the domestic industry's indicators were higher in interim 2021 compared to interim 2020. However, given that the interim period is only three months and considering that it follows the particularly volatile period affected by the COVID-19 pandemic, we accord greater weight to the POI's full year data for purposes of these preliminary determinations. *See also* CR/PR at VI-5 (discussing ***, which we will examine further in any final phase of these investigations).

[161] CR/PR at Table C-1. Accordingly, domestic capacity increased by *** percent during the full three-year period (from 2018 to 2020). *Id*. Zeon's capacity was *** pounds in interim 2020 and interim 2021. *Id.*

[162] CR/PR at Table C-1. Thus, domestic production declined by *** percent from 2018 to 2020. *Id*. Zeon's production was *** pounds in interim 2020 and *** pounds in interim 2021. *Id.*

declined from *** percent in 2018 to *** percent in 2019 and *** percent in 2020.[163] Zeon's U.S. shipments decreased from *** pounds in 2018 to *** pounds in 2019 and to *** pounds in 2020.[164] Notwithstanding this decline, however, Zeon gained market share from 2018 to 2020, as apparent U.S. consumption declined. Its market share was *** percent in 2018, *** percent in 2019, and *** percent in 2020.[165] Zeon's ending period inventories initially increased from *** pounds in 2018 to *** pounds in 2019, before decreasing to *** pounds in 2020.[166]

Zeon's employment indicators were mixed during the 2018 to 2020 period. Zeon's production related workers ("PRWs") increased from *** PRWs in 2018 to *** PRWs in 2019 and to *** PRWs in 2020.[167] Hours worked increased from *** in 2018 to *** in 2019 before decreasing to *** in 2020.[168] Total wages paid increased from $*** in 2018 to $*** in 2019 before decreasing to $*** in 2020.[169] Hourly wages were $*** per hour in 2018, $*** per hour in 2019, and $*** per hour in 2020.[170] Productivity was *** pounds per hour in 2018, *** pounds per hour in 2019, and *** pounds per hour in 2020.[171]

Zeon's net sales value fell from $*** in 2018 to $*** in 2019 and to $*** in 2020.[172] Its

[163] CR/PR at Table C-1. Accordingly, domestic capacity utilization declined by *** percentage points from 2018 to 2020. *Id*. Zeon's capacity utilization was *** percent in interim 2020 and *** percent in interim 2021. *Id.*

[164] CR/PR at Table C-1. Thus, domestic shipments declined by *** percent from 2018 to 2020. *Id*. Zeon's U.S. shipments were *** pounds in interim 2020 and interim 2021. *Id.*

[165] CR/PR at Table C-1. Accordingly, domestic producer's market share increased by *** percent from 2018 to 2020. *Id*. Zeon's market share was *** percent in interim 2020 and *** percent in interim 2021. *Id.*

[166] CR/PR at Table C-1. Thus, domestic ending period inventories increased by *** percent from 2018 to 2020. *Id*. Zeon's ending inventories were *** pounds in interim 2020 and *** pounds in interim 2021. *Id.*

[167] CR/PR at Table C-1. Accordingly, domestic PRWs increased by *** percent from 2018 to 2020. *Id*. Zeon's PRWs were *** in interim 2020 and *** in interim 2021. *Id.*

[168] CR/PR at Table C-1. Thus, domestic hours declined by *** percent from 2018 to 2020. *Id*. Zeon's hours worked were *** in interim 2020 and *** in interim 2021. *Id.*

[169] CR/PR at Table C-1. Accordingly, total wages increased by *** percent from 2018 to 2020. *Id*. Zeon's total wages paid were $*** in interim 2020 and $*** in interim 2021. *Id.*

[170] CR/PR at Table C-1. Thus, hourly wages increased by *** percent from 2018 to 2020. *Id*. Hourly wages were $*** per hour in interim 2020 and $*** per hour in interim 2021. *Id.*

[171] CR/PR at Table C-1. Accordingly, domestic productivity declined by *** percent from 2018 to 2020. *Id*. Productivity was *** pounds per hour in interim 2020 and *** pounds per hour in interim 2021. *Id.*

[172] CR/PR at Table C-1. Thus, the domestic net sales value declined by *** percent from 2018 to 2020. *Id*. It was $*** in interim 2020 and $*** in interim 2021. *Id.*

total COGS also declined overall from $*** in 2018 and 2019 to $*** in 2020.[173] Zeon's profitability declined by all measures from 2018 to 2020. Gross profits fell from $*** in 2018 to $*** in 2019 and to $*** in 2020.[174] Operating income fell from $*** in 2018 to $*** in 2019 and to $*** in 2020.[175] Net income fell from $*** in 2018 to $*** in 2019 and to $*** in 2020.[176] Zeon's ratio of operating income to net sales decreased from *** percent in 2018 to *** percent in 2019 and to *** percent in 2020.[177] Zeon's ratio of net income to net sales decreased from *** percent in 2018 to *** percent in 2019 and to *** percent in 2020.[178] Zeon's capital expenditures were $*** in 2018, $*** in 2019, and $*** in 2020.[179] Its R&D expenses were $*** in 2018, $*** in 2019, and $*** in 2020.[180]

As discussed above, the volume of cumulated subject imports was significant in absolute terms as well as relative to apparent U.S. consumption. The record in the preliminary phase of these investigations indicates that this significant volume of cumulated subject imports significantly undersold the domestic like product, and we cannot find during the preliminary phase that cumulated subject imports did not depress prices for the domestic like product to a significant degree. Accordingly, we cannot conclude that cumulated subject imports did not materially contribute to financial declines in the domestic industry's performance. Thus, based on the available information, we cannot find that cumulated subject imports did not have a significant impact on the domestic industry for purposes of these preliminary determinations.

We have also considered the role of any factors other than subject imports to ensure that we are not attributing injury from such other factors to subject imports. Nonsubject imports accounted for a declining share of the U.S. market during the POI, losing market share to both the domestic industry and subject imports. As discussed above, nonsubject imports' share of apparent U.S. consumption declined from *** percent in 2018 and 2019 to ***

[173] CR/PR at Table C-1. Accordingly, domestic total COGS declined by *** percent from 2018 to 2020. *Id*. Its COGS was $*** in interim 2020 and $*** in interim 2021. *Id.*

[174] CR/PR at Table C-1. Gross profits were $*** in interim 2020 and $*** in interim 2021. *Id.*

[175] CR/PR at Table C-1. Operating income was $*** in interim 2020 and $*** in interim 2021. *Id.*

[176] CR/PR at Table C-1. Net income was $*** in interim 2020 and $*** in interim 2021. *Id.*

[177] CR/PR at Table C-1. The ratio of operating income to net sales was *** percent in interim 2020 and *** percent in interim 2021. *Id.*

[178] CR/PR at Table C-1. The ratio of net income to net sales was *** percent in interim 2020 and *** percent in interim 2021. *Id.*

[179] CR/PR at Table C-1. Thus, domestic capital expenditures increased *** percent from 2018 to 2020. *Id*. Its capital expenditures were $*** in interim 2020 and $*** in interim 2021. *Id.*

[180] CR/PR at Table C-1. According, domestic R&D expenses declined *** percent from 2018 to 2020. *Id*. Zeon's R&D expenses were $*** in interim 2020 and $*** in interim 2021. *Id.*

percent in 2020.[181] In addition, the available record evidence indicates that nonsubject imports tend to be priced higher than subject imports.[182] Thus, for purposes of our preliminary determinations, we do not find that the presence of nonsubject imports explains the declines in the domestic industry's condition. However, given that Zeon largely is responsible for the considerable presence of nonsubject imports in the U.S. market and the evidence that Zeon coordinates its supply of NBR to the U.S. market with supply from its parent company in Japan,[183] we intend to further explore that relationship and the role of nonsubject imports in any final phase of these investigations.

Additionally, as discussed above, the record indicates that demand for NBR in the U.S. market declined during the POI, both prior to and due to the COVID-19 pandemic. The parties disagree as to whether, and to what degree, declining demand contributed to the domestic industry's declining financial performance.[184] Although we are unable to find in the preliminary phase of these investigations that declining demand fully explains the declines in the domestic industry's performance, we intend to explore this issue further in any final phase of these investigations.

The parties also disagree as to whether and to what extent subject imports compete with domestically produced NBR. Kumho argues that competition between the domestic like product is attenuated because subject imports are comprised predominantly of commodity grade NBR, while Zeon focuses its U.S. production on specialty grades used in automotive, oil

[181] CR/PR at Table IV-10. Thus, nonsubject imports' share of apparent U.S. consumption declined by *** percentage points from 2018 to 2020. *Id*. Nonsubject imports' share of apparent U.S. consumption was *** percent in interim 2020 and lower, at *** percent, in interim 2021. *Id*.

[182] CR/PR at Table C-1. The average unit values ("AUVs") of nonsubject imports were $1.38 in 2018, $1.46 in 2019, and $1.14 in 2020; they were $1.26 in interim 2020 and $1.52 in interim 2021. The AUVs of subject imports were $1.23 in 2018, $1.12 in 2019, and $0.96 in 2020; they were $1.06 in interim 2020 and $1.09 in interim 2021. *Id.* Thus, the AUVs of nonsubject imports declined 17.4 percent from 2018 to 2020, while the AUVs of subject imports declined 22.0 percent over the same period. *Id*.

[183] *See, e.g.,* Zeon Postconference Br. at 28-29.

[184] Kumho asserts that the market segments primarily served by Zeon, such as the automotive and oil and gas segments, "sharply" declined during the POI. Kumho Postconference Br. at 34. Zeon acknowledges that the market segment in which NBR is sold "may implicate some variance in the per-unit average profit." It asserts, however, that it has not meaningfully shifted the proportions of its sales to the various market segments. According to Zeon, there was "at most a negligible impact" to its profitability based on this shift. Zeon Postconference Br. at 24.

and gas, and industrial machinery.[185] Respondents also contend that the batch production process used by Zeon in its U.S. facility limits the interchangeability between the domestic like product and subject imports and that NBR produced in Zeon's U.S. facility has been of poor or inconsistent quality.[186] Zeon, on the other hand, claims that, to the best of its knowledge, foreign producers have the technical capabilities to produce NBR that is highly substitutable with the domestic like product and *vice versa*.[187] The parties also dispute whether and to what extent the process of certification and qualification affects how NBR is supplied to the U.S. market.[188] Although, as discussed above, the record in the preliminary phase of these investigations indicates that the domestic like product and subject imports have a moderately high degree of interchangeability and compete in the U.S. market, we intend to further explore these issues in any final phase of these investigations.

We, therefore, cannot find that cumulated subject imports did not have a significant impact on the domestic industry for purposes of these preliminary determinations.

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[185] According to Kumho, purchasers in the automotive, oil and gas, and industrial machinery segments of the market frequently have particular specifications and require higher ACN content, specialty grade NBR, which typically costs more. In contrast, other segments such as the walk-off mat and commercial printing segments use less expensive commodity grade NBR with a moderate ACN content. Kumho Postconference Br. at 4-6, 17-18, Exhs. 4, 17-18. We note that the record in the preliminary phase of these investigations does not suggest a clear definition of what constitutes "commodity" and "specialty" grades of NBR. Kumho disputes Zeon's assertion that NBR grades with ACN content between 26 and 41 percent are commodity grades. Citing the Commission's negative preliminary determinations in *Nitrile Rubber from Korea*, Inv. No. 731-TA-827 (Preliminary), USITC Pub. 3210 (July 1999) at 6, Kumho appears to suggest that commodity grades of NBR "contain{} 31 to 35 percent acrylonitrile." Kumho Postconference Br. at 3-5. However, it also produced an affidavit in which the affiant describes the NBR that it purchases as a ***. *Id.* at Exh. 18, para. 5. In any final phase of these investigations, we will further examine the distinction between different grades of NBR and we invite the parties to suggest in comments on the draft questionnaires how the Commission can collect data to aid in that examination.

[186] Arlanxeo Postconference Br. at 4, 7-9; Kumho Postconference Br. at 18-21, Exhs. 3, 17-18, Exhs. 3, 4, 17, Response to Staff Questions at 1, 17-18; Negromex Postconference Br. at 10-12.

[187] Zeon Postconference Br. at 24-25, Exhibit 4; Petition, Exhs. I-14, I-15.

[188] According to Kumho, customer specifications and certification requirements limit interchangeability between domestic and imported NBR. Kumho Postconference Br. at 18-21, Exhs. 3, 4, 17, Response to Staff Questions at 1, 17-18. Zeon claims that, in its experience, the process to qualify its products with a customer has "involved an easy and relatively rapid process." According to Zeon, many customers co-qualify multiple suppliers, which enables rapid switching between vendors, and both it and subject producers are often pre-qualified to supply the same customers. Zeon Postconference Br. at 24-26. Zeon also contends that *** of its U.S. sales were on the spot market, reflecting the ease with which purchasers are able to switch suppliers. *Id*. at 28.

VIII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of subject imports of NBR from France, Korea, and Mexico that are allegedly 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, Korea, and Mexico. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
June 30, 2021	Petitions filed with Commerce and the Commission; institution of Commission investigations (86 FR 35825, July 7, 2021)
July 20, 2021	Commerce's notice of initiation (86 FR 40192, July 27, 2021)
July 21, 2021	Commission's conference
August 13, 2021	Commission's vote
August 16, 2021	Commission's determinations
August 23, 2021	Commission's views

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*

[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] A list of witnesses appearing at the conference is presented in appendix B of this report.

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.

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

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

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, alleged 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. producer. 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 Korea, and *** of Mexico. The leading U.S. importer of NBR from France is ***, and the leading U.S. importer of NBR from Mexico is ***. The leading importer of NBR from nonsubject countries (primarily ***) is ***. U.S. purchasers of NBR are firms that are distributors, mixers, and end users in a variety of industries, including the automotive and oil and gas industries; leading purchasers responding to lost sales and lost revenue allegations include ***.

Apparent U.S. consumption of NBR totaled approximately *** pounds ($***) in 2020. The U.S. producer's U.S. shipments of NBR totaled *** pounds ($***) in 2020 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from subject sources totaled 58.8 million pounds ($56.4 million) in 2020 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled ***

*** pounds ($***) in 2020 and accounted for *** percent of apparent U.S. consumption by quantity and 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 response of one firm that accounted for 100 percent of U.S. production of NBR during 2020. U.S. imports are based on official U.S. import statistics and the questionnaire responses received from 16 companies, representing an estimated *** percent of U.S. imports from France, *** U.S. imports from Korea, *** percent of U.S. imports from Mexico, and *** percent of U.S. imports from nonsubject sources.[6]

Previous and related investigations

NBR has been the subject of two prior antidumping duty investigations in the United States.

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.[7] On June 16, 1988, Commerce issued an antidumping duty order on NBR from Japan.[8] 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.[9] 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.[10] In October 1999, Commerce revoked the antidumping duty order on NBR from Japan.[11]

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

[6] Official import statistics have been adjusted to remove out-of-scope product, as explained in greater detail in part IV.

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

[8] 53 FR 22553, June 16, 1988.

[9] 64 FR 15788, April 1, 1999 and 64 FR 38475, July 16, 1999.

[10] 64 FR 51557, September 23, 1999.

[11] 64 FR 53999, October 5, 1999.

injury by reason of LTFV imports of NBR from Korea.[12] 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 Korea.[13]

Nature and extent of alleged sales at LTFV

On July 27, 2021, Commerce published a notice in the Federal Register of the initiation of its antidumping duty investigations on NBR from France, Korea, and Mexico.[14] Commerce has initiated antidumping duty investigations based on estimated dumping margins of 41.73 percent for NBR from France, 105.38 percent for NBR from Korea, and 92.70 percent for NBR from Mexico.

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. 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.*

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

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

[14] 86 FR 40192, July 27, 2021.

[15] 86 FR 40192, July 27, 2021.

Also excluded from the scope of these investigations is: (a) AB Rubber containing additives (e.g., nitrile rubber further compounded with fillers, reinforcement agents, vulcanization agents, etc.; by example, products classified under HTSUS subheading 4005); (b) AB Rubber containing rubber processing chemicals, AB Rubber containing other materials used for further processing beyond the polymerization process; (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 investigations 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, Korea, and Mexico enters the U.S. market at the general rate of duty of free. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Section 301 tariff treatment

NBR provided for in HTS subheading 4002.59.00 was included in the Office of the United States Trade Representative's ("USTR's") second enumeration ("Tranche 3, List 3") of products of China that 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.[16]

[16] HTSUS (2021), Basic Edition, Revision 6, USITC Publication 5214, July 2021, Ch 99, 20(f), pp. 20, 34. USTR's 301 actions are only applicable to products of China. For the time period only from after May 10, (continued...)

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

(…continued)

2019 and before June 15, 2019, goods subject to 9903.88.09 from Ch 99, 20(f) had an additional 10 percent ad valorem duty added, as stated in Ch 99, 20(l).

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

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

[22] Petition, 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.

abrasion resistance improve.[24] As acrylonitrile content decreases, low temperature performance, dynamic performance, compression set, and resilience all improve.[25] With 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]

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.[28] The automotive industry is the primary market segment, and it accounts for about 25 percent of consumption of NBR.[29] 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) belting (V-belts for mechanical power transmission; mining belts for conveying materials); and 12) food handling (hoses; milking inflators; sanitary applications).[30] 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.[31]

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[24] Conference transcript, p. 18 (Saunders); Petition, p. 5.

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

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

[27] Conference transcript, p. 18 (Saunders); Petition, pp. 5-6.

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

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

[30] Petition, p. 8.

[31] 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).

NBR is sold in bale (slab), powder, pellet, particulate (crumb), and liquid forms.[32] The majority of shipments are in the form of compressed bales.[33] The bale end users are typically those making rubber parts.[34] The petitioner produces approximately 60 products,[35] Industrias Negromex of Mexico produces *** products of various grades, of which *** are for the U.S. market,[36] and Kumho of Korea produces *** products of which *** were sold to the U.S. during the POI.[37]

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.[38] 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

[32] Petition, p. 6; Petitioner's postconference brief, pp. 8-9. Petitioner separates commodity and specialty grades of bale based on factors such as acrylonitrile content and Mooney viscosity. 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.

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

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

[35] Conference transcript, p. 90 (Saunders).

[36] Respondent Negromex's postconference brief, Exhibit 1, question 14. Negromex stated it produces *** percent commodity grade and *** percent specialty grade. Exhibit 1, question 14.

[37] Respondent Kumho's postconference brief, Exhibit 1, p. 18. Kumho only produces commodity grade and states commodity grade, moderate ACN content NBR is not directly competitive with specialty grade NBR because customers are unable to substitute these products in different end-use applications due to stringent technical requirements. Respondent Kumho's postconference brief, p. 5 and Exhibit 1, p. 3.

[38] 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).

desired percentage of acrylonitrile in the final product.[39] 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).[40] 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.[41] 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.[42] This is known as the monomer recovery process.[43] 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.[44]

[39] 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.

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

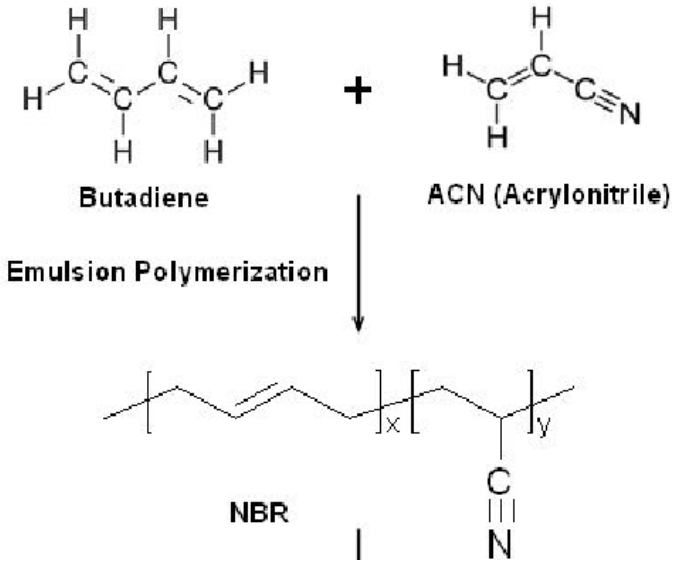
[41] Conference transcript, p. 93 (Recchio).

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

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

[44] 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).

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.[45] The reaction is exothermic, so heat is removed using a cooling system to maintain a constant temperature until the desired degree of polymerization is achieved.[46] 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.[47]

It is at this step that NBR latex and solid NBR become distinct and differentiated within the manufacturing process, with NBR latex foregoing further processing and solid NBR requiring

[45] Petition, 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.

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

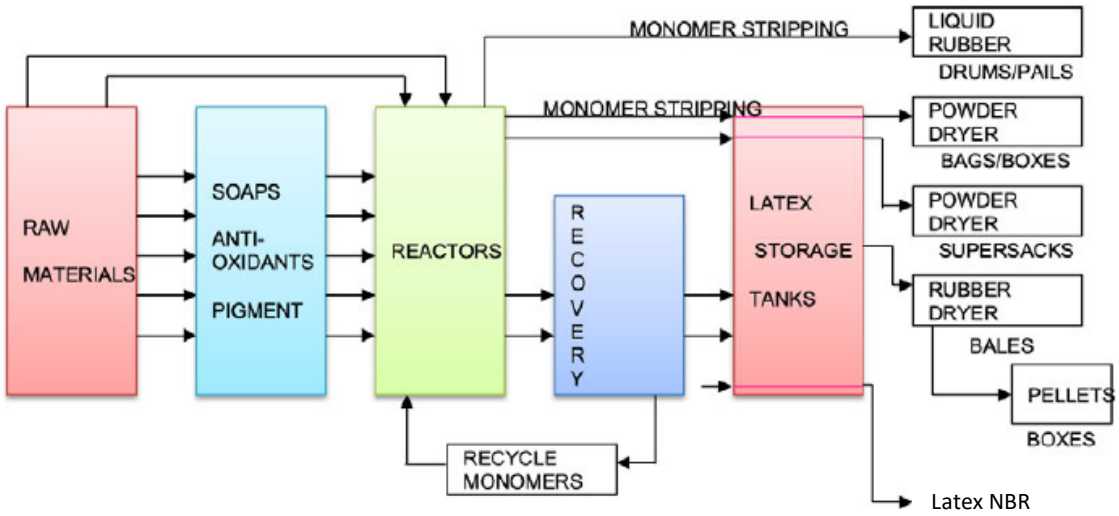
[47] Conference transcript, p. 20 (Saunders). Latex NBR is out of scope while solid NBR is in scope of these investigations.

additional steps to produce.[48] 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.[49]

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.[50] 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.[51]

[48] Conference transcript, p. 16 (Saunders).
[49] Conference transcript, p. 17 (Saunders).
[50] Petitioner's postconference brief, p. 11.
[51] Petitioner's postconference brief, p. 12.

Figure I-2. Manufacturing process for NBR



Source: Petition, 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.[52]

The manufacturing process can be competed 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.[53] 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.[54] Respondent Industrias Negromex uses both batch and continuous processes, and uses the batch process for its specialty and commodity products that are produced in small volumes.[55] Petitioner gives a rough estimation that the continuous process is 10 to 15 percent less costly

[52] Petitioner also measures heat loss. Industrias Negromex measures humidity. Conference transcript, p. 95-96 (Recchio); p. 175 (Plaza).
[53] Conference transcript, pp. 39-40 (Recchio).
[54] Conference transcript, p. 177 (Plaza).
[55] Conference transcript, p. 180 (Sjoberg); p. 180 (Plaza).

than the batch process.[56] Respondents Industrias Negromex and Dynasol ("Negromex") agree with the 10 to 15 percent cost savings estimate and notes it is related to steam and power calculated per ton between batch operation records and continuous operation records.[57] Industrias 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.[58] Respondent Kumho operates in *** percent continuous mode and *** percent batch mode.[59] Respondent Arlanxeo Emulsion indicates that ***.[60] Other than the batch and continuous parts of the system, there are no known differences in the manufacturing processes of petitioners and respondents.[61]

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.[62] Citing the limited time in preliminary investigations, respondent Kumho does not contest the petitioner's definition of the domestic like product, but reserves the right to do so, should these investigations proceed to a final phase.[63]

The U.S. producer and importers were asked to compare (1) in-scope NBR and out-of-scope HNBR, and (2) XNBR (in-scope) and all other in-scope NBR, based on the Commission's six-factor analysis of the appropriate domestic product(s) that are "like" the subject imported product, including: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) common manufacturing facilities, production processes, and production

[56] Conference transcript, p. 102 (Markan).

[57] Respondent Negromex's postconference brief, Exhibit 1, question 1. Negromex gives a more detailed calculation of *** in Exhibit 1, question 12. Respondent Kumho states ***. Respondent Kumho's post conference brief, Exhibit 1, p. 3.

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

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

[60] Respondent ARLANXEO's postconference brief, p. 4.

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

[62] Petitioner's postconference brief, p.4.

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

employees; (5) customer and producer perceptions; and (6) price. The U.S. producer's and U.S. importers' responses can be found in Appendix D.

Generally, the majority of respondents (U.S. producer Zeon and U.S. importers) reported that NBR and HNBR are *** comparable for all factors, except channels of distribution, which the majority reported as *** comparable. When comparing NBR and XNBR, U.S. producer Zeon reported *** factors were *** comparable, while the majority of U.S. importers reported that NBR and XNBR are *** comparable with regard to physical characteristics, interchangeability, perceptions, or price. The majority of U.S. importers reported that NBR and XNBR are *** comparable with regard to channels of distribution and manufacturing.

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 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 approximately 10-15 percent more expensive but adds to production versatility.[7] 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, Exhibit 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, Exhibit 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); Mexican respondent postconference brief, Exhibit 1, no. 1.

[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 *** percent during January 2018-December 2020.

Channels of distribution

The U.S. producer sold *** to end users and *** to custom mixers, and subject imports were sold mainly to end users and custom mixers, as shown in table II-1. *** of the imports from France and the majority of imports from Korea were sold to end users, and the majority of imports from Mexico were sold to ***.

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

Shares in percent

Source	Channel	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
United States	Share to distributors	***	***	***	***	***
United States	Share to custom mixers	***	***	***	***	***
United States	Share to end users	***	***	***	***	***
France	Share to distributors	***	***	***	***	***
France	Share to custom mixers	***	***	***	***	***
France	Share to end users	***	***	***	***	***
Korea	Share to distributors	***	***	***	***	***
Korea	Share to custom mixers	***	***	***	***	***
Korea	Share to end users	***	***	***	***	***
Mexico	Share to distributors	***	***	***	***	***
Mexico	Share to custom mixers	***	***	***	***	***
Mexico	Share to end users	***	***	***	***	***
Subject	Share to distributors	26.2	18.2	6.6	9.0	3.9
Subject	Share to custom mixers	26.3	30.9	31.6	31.9	40.4
Subject	Share to end users	47.5	50.9	61.8	59.0	55.7
Nonsubject	Share to distributors	***	***	***	***	***
Nonsubject	Share to custom mixers	***	***	***	***	***
Nonsubject	Share to end users	***	***	***	***	***
All imports	Share to distributors	***	***	***	***	***
All imports	Share to custom mixers	***	***	***	***	***
All imports	Share to end users	***	***	***	***	***

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

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

Geographic distribution

The U.S. producer and importers reported selling NBR to all contiguous regions in the United States (table II-2). For the U.S. producer, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers sold *** percent within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-2
NBR: Count of U.S. producer's and U.S. importers' presence in geographic markets, by region and by source of supply

Count in number of firms reporting

Region	U.S. producer	France	Korea	Mexico	Subject sources
Northeast	***	2	2	1	5
Midwest	***	2	4	1	7
Southeast	***	2	3	1	6
Central Southwest	***	2	3	1	6
Mountains	***	1	1	1	3
Pacific Coast	***	1	3	1	5
Other	***	0	0	0	0
All regions (except Other)	***	1	1	1	3
Reporting firms	1	2	5	1	8

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. U.S. production capacity increased over the period, while capacity remained constant for NBR producers in subject countries. Capacity utilization in the United States, France, and Mexico decreased substantially over the period, and capacity utilization by Korean producers of NBR declined ***. Inventories as a ratio to production increased *** for the U.S. producer, while subject producers' inventories decreased or only faced slight increases.

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

Quantity in 1,000 pounds; ratios in percent; capacity utilization as ratio of production to capacity; ending inventories and home and non-U.S. export markets as ratio to total shipments; count in number of firms reporting "yes" responses

Factor	Measure	United States	France	Korea	Mexico	Subject suppliers
Capacity 2018	Quantity	***	***	***	***	***
Capacity 2020	Quantity	***	***	***	***	***
Capacity utilization 2018	Ratio	***	***	***	***	***
Capacity utilization 2020	Ratio	***	***	***	***	***
Ending inventories 2018	Ratio	***	***	***	***	***
Ending inventories 2020	Ratio	***	***	***	***	***
Home market 2020	Ratio	***	***	***	***	***
Non-US export markets 2020	Ratio	***	***	***	***	***
Ability to shift production	Count	***	***	***	***	***

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

Note: The responding U.S. producer accounted for virtually all of U.S. production of NBR in 2020. Responding foreign producers/exporters accounted for more than half of imports from France in 2020, less than half of imports from Korea, and more than 75 percent of imports in Mexico. 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 *** 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 the availability of unused capacity, the ability to shift shipments from alternate markets and inventories, and some ability to shift production to or from alternate products.

U.S. production capacity increased over the period, which contributed to the large decrease in capacity utilization from 2018 to 2020. More than *** of the U.S. producer's shipments of NBR were exported, and Zeon reported that ***. Zeon stated that it did not experience any shortages in its U.S. production facilities, although it did face supply constraints in its imported NBR from nonsubject country Japan, due to a planned maintenance shutdown.[11]

[11] Conference transcript, p. 73 (Cail).

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 included limited inventories and an inability to shift production to or from alternate products.

Subject imports from Korea

Based on available information, producers of NBR from Korea have the ability to respond to changes in demand with moderately large 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 and inventories, and an inability to shift production to or from alternate products.

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, and the ability to shift shipments from alternate markets and inventories. Factors mitigating responsiveness of supply include an inability to shift production from alternate products.

Imports from nonsubject sources

Nonsubject imports accounted for 31.2 percent of total U.S. imports in 2020. The largest source of nonsubject imports during 2018-2020 was Japan, which accounted for more than two-thirds of nonsubject imports in 2020.

Supply constraints

U.S. producer *** Zeon reported that it *** supply constraints since January 1, 2018, citing a ***. Eight of 14 importers reported that they had not experienced supply constraints since January 1, 2018. The remaining six importers that had experienced supply constraints cited the

increased demand for latex NBR as an input for nitrile gloves due to the pandemic, which has taken priority over NBR manufacturing; supply chain and logistics disruptions, including ocean logistics issues, congested ports, and shortages of equipment; and force majeures declared by producers of acrylonitrile, which disrupted the supply of an input to NBR.

During 2020, ocean freight and logistics contributed to supply constraints in the United States.[12] Respondent Negromex 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.[13]

U.S. demand

Based on available information, the overall demand for NBR is likely to experience 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:

- Hydraulic, fuel, and other hoses (40-50 percent)
- Flooring mats (40 percent)
- Compounds (40 percent)
- Flexible PVC (40 percent)
- Conveyor and power transmission belts (30 percent)
- Wire and cables (10 percent)

Business cycles

U.S. producer Zeon stated that demand for NBR is non-seasonal and that the NBR market is ***.[14] Most importers reported that the NBR market was not subject to business cycles (10 of 14) or distinct conditions of competition (13 of 14). Importer *** reported that demand for NBR increases during the first quarter of the year as customers restock their inventories; that there

[12] Conference transcript, p. 73 (Cail).
[13] Conference transcript, p. 168 (Quintero).
[14] Petitioner's postconference brief, p. 22.

is a slowdown during the summer season as auto production slows; and customers try to offload their inventories at the end of the year. Two importers (***) reported that the NBR market exhibits some seasonality connected with the oil and gas, mining, and construction industries. Importer *** reported distinct conditions of competition, citing different end uses for NBR requiring different grades.

Demand trends

U.S. producer Zeon reported *** in U.S. demand for NBR since January 1, 2018 (table II-4). A plurality of importers reported that demand fluctuated since 2018, and three importers (including ***) reported that U.S. demand declined. Importer *** reported that one application for NBR, runway resurfacing, is dependent on weather and government contracts. Importer *** reported that the automotive sector was adversely affected by the COVID-19 pandemic and importer *** reported that its customers purchased less in 2019 and that the COVID-19 pandemic also adversely affected demand for NBR.

Table II-4
NBR: Count of U.S. producer's and U.S. importers' responses regarding overall U.S. demand and demand outside the United States, by firm type

Count in number of firms reporting

Market	Firm type	Increase	No change	Decrease	Fluctuate
Domestic demand	U.S. producer	***	***	***	***
Domestic demand	Importers	1	2	3	5
Foreign demand	U.S. producer	***	***	***	***
Foreign demand	Importers	1	3	1	4

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

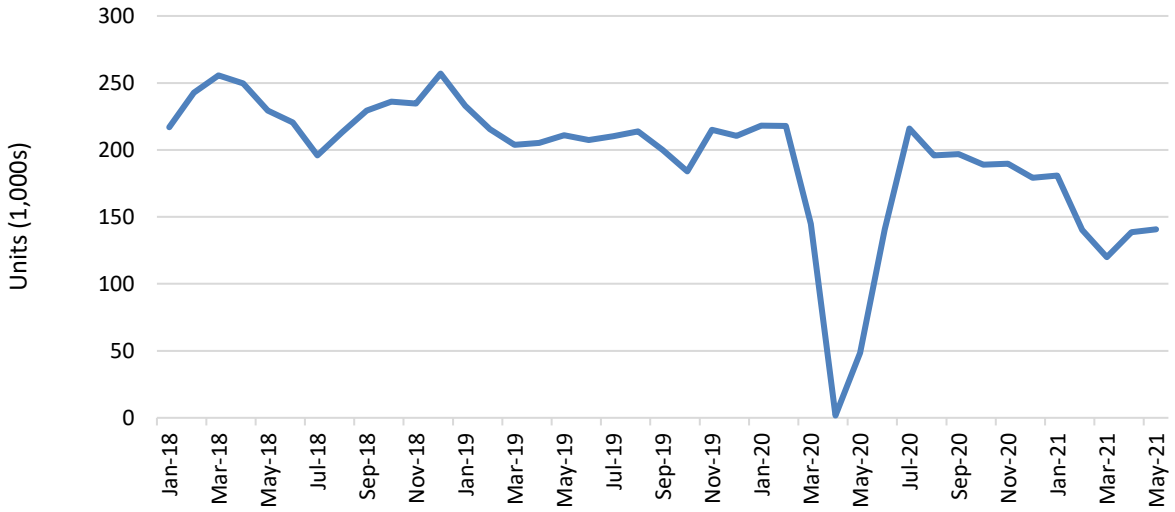
Domestic auto production declined during 2018-20 (see figure II-1 and table II-5). Oil and gas production increased slightly through 2019 before declining through 2020 (figure II-2 and table II-6). Petitioners and respondents indicated that demand for NBR was affected by declines in auto production and sales and in the oil and gas sector in 2020.[15] Similarly, the demand for walk-off mats, which are used in manufacturing plants, restaurants, and casinos, also declined during the COVID-19 pandemic.[16]

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

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

Figure II-1

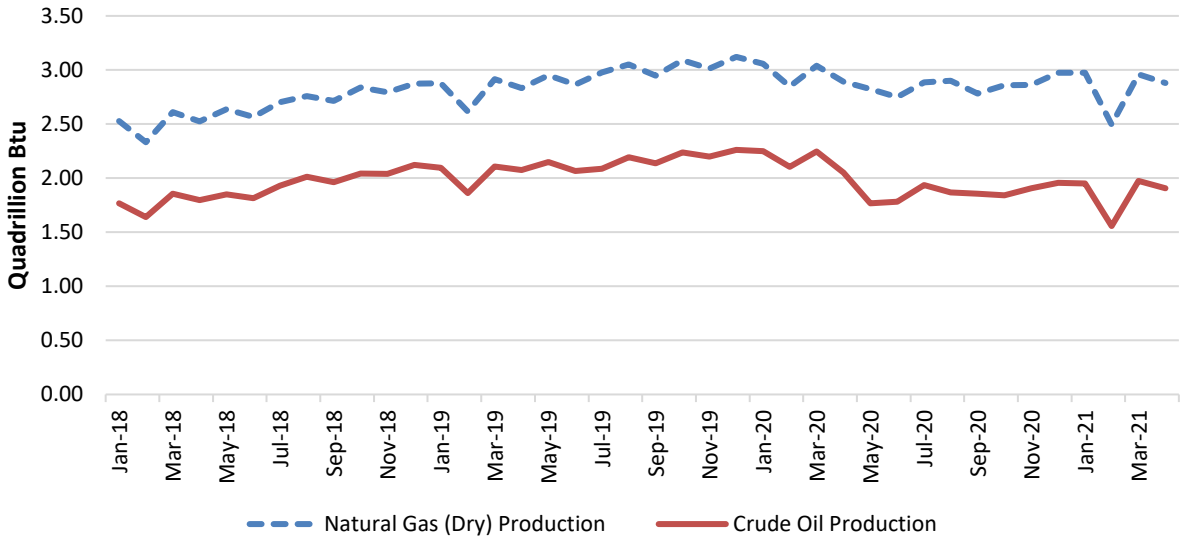
Domestic auto production: Thousands of units, monthly, seasonally adjusted, January 2018-May 2021



Source: Federal Reserve Economic Data, Domestic auto production, https://fred.stlouisfed.org/series/DAUPSA, accessed July 29, 2021.

Figure II-2

Oil and gas production: Quadrillion btu, monthly, January 2018-April 2021



Source: EIA, Primary energy production by source, https://www.eia.gov/totalenergy/data/monthly/#prices, accessed July 29, 2021.

Table II-5
Domestic auto production: Seasonally adjusted U.S. production, monthly, January 2018-May 2021

Quantity in thousands of units

Year	Month	Quantity
2018	January	217
2018	February	243
2018	March	256
2018	April	250
2018	May	229
2018	June	221
2018	July	196
2018	August	213
2018	September	229
2018	October	236
2018	November	235
2018	December	257
2019	January	233
2019	February	215
2019	March	204
2019	April	205
2019	May	211
2019	June	207
2019	July	210
2019	August	214
2019	September	200
2019	October	184
2019	November	215
2019	December	210
2020	January	218
2020	February	218
2020	March	145
2020	April	2
2020	May	49
2020	June	141
2020	July	216
2020	August	196
2020	September	197
2020	October	189
2020	November	190
2020	December	179
2021	January	181
2021	February	140
2021	March	120
2021	April	139
2021	May	141

Source: Federal Reserve Economic Data, Domestic auto production, https://fred.stlouisfed.org/series/DAUPSA, accessed July 29, 2021.

Table II-6
Oil and gas: U.S. natural gas (dry) and crude oil production, monthly, January 2018-April 2021

Production in quadrillions of British thermal units (btu)

Year	Month	Natural gas (dry) production	Crude oil production
2018	January	2.5	1.8
2018	February	2.3	1.6
2018	March	2.6	1.9
2018	April	2.5	1.8
2018	May	2.6	1.8
2018	June	2.6	1.8
2018	July	2.7	1.9
2018	August	2.8	2.0
2018	September	2.7	2.0
2018	October	2.8	2.0
2018	November	2.8	2.0
2018	December	2.9	2.1
2019	January	2.9	2.1
2019	February	2.6	1.9
2019	March	2.9	2.1
2019	April	2.8	2.1
2019	May	3.0	2.1
2019	June	2.9	2.1
2019	July	3.0	2.1
2019	August	3.1	2.2
2019	September	2.9	2.1
2019	October	3.1	2.2
2019	November	3.0	2.2
2019	December	3.1	2.3
2020	January	3.1	2.3
2020	February	2.8	2.1
2020	March	3.0	2.2
2020	April	2.9	2.1
2020	May	2.8	1.8
2020	June	2.7	1.8
2020	July	2.9	1.9
2020	August	2.9	1.9
2020	September	2.8	1.9
2020	October	2.9	1.8
2020	November	2.9	1.9
2020	December	3.0	2.0
2021	January	3.0	2.0
2021	February	2.5	1.6
2021	March	3.0	2.0
2021	April	2.9	1.9

Source: EIA, Primary energy production by source, https://www.eia.gov/totalenergy/data/monthly/#prices, accessed July 29, 2021.

Supplier qualifications

Petitioner Zeon stated that qualifying NBR products for a new customer is a simple and quick process, and that many of Zeon's customers "co-qualify" multiple suppliers when developing a new part or rubber compound, which enables the customer to switch between suppliers quickly.[17] Respondent Kumho stated that customer specifications and qualification processes limit the interchangeability of NBR from different sources and that there is resource-intensive testing before a customer will switch to a new supplier.[18]

Substitute products

U.S. producer Zeon stated that there are few substitutes for NBR for certain applications, such as polychloroprene rubber for certain insulation applications and styrene butadiene rubber ("SBR") for some conveyor belting applications; however, substitution is generally limited.[19] Most importers reported that there are no substitutes for NBR, but two importers reported that there are substitutes for NBR. Substitutes for NBR include ethylene propylene diene rubber for sponge insulation, polychloroprene rubber ("CR") for hoses, SBR for belting, and elvaloy (modified ethylene copolymer resin) for flexible PVC.

Substitutability issues

This section will assess 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 moderately high degree of substitutability between domestically produced NBR and NBR imported from subject sources.[20] Factors contributing to this level of substitutability include similar quality and lead times from

[17] Petitioner's postconference brief, pp. 25-26.

[18] Respondent Kumho's postconference brief, pp. 20-21; conference transcript, pp. 191-192 (Kendler).

[19] 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 postconference brief, Exhibit 1, p. 2.

[20] 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 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.).

U.S. inventories. Firms generally reported that there is interchangeability between NBR from the United States and subject sources, but some reported limited significant factors other than price, including customer approval, end use application, batch-processing versus continuous processing, logistics and performance.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations[21] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for NBR. The major purchasing factors identified by firms include price, technical specifications, quality, reliability, and/or availability.

Table II-7
NBR: Count of ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Number of firms reporting

Factor	First	Second	Third	Total
Price / Cost	0	1	8	9
Specifications	6	1	0	7
Quality	3	2	1	6
Reliability	2	3	0	5
Availability	0	3	1	4
All other factors	0	1	1	NA

Source: Compiled from data submitted in response to Commission questionnaires.
Note: Other factors include lead times, technical support, product technology, willingness for supplier to maintain consignment inventory, supplier's historical performance factors, and payment terms.
Note: NA = Not applicable.

Lead times

NBR is primarily sold from inventory. U.S. producer Zeon reported that *** percent of their commercial shipments were sold from inventories, with lead times averaging *** days. The remaining *** percent of their commercial shipments were produced-to-order, with lead times averaging *** days. Importers reported that *** percent of their commercial shipments were sold from U.S. inventories, *** percent from foreign inventories, and the remaining *** percent of commercial shipments were produced-to-order. Importers reported average lead times of *** days for NBR sold from U.S. inventories, *** days for imported NBR sold from foreign inventories, and *** days for produced-to-order NBR.

[21] This information is compiled from responses by purchasers identified by Petitioner to the lost sales lost revenue allegations. See Part V for additional information.

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, Korea, and Mexico, the U.S. producer and importers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in tables II-8 and II-9, most firms reported that products can always or frequently be used interchangeably. Importer *** reported that many customers prefer NBR from Kumho (Korea) because of technical differences in specialty elastomers, and that NBR from nonsubject source Japan (imported by Zeon) is similar. Importers *** reported that interchangeability depends on quality, customer approval, and end-use applications. Respondent Kumho stated that U.S. producer Zeon's batch-produced NBR is not as consistent as NBR produced through a continuous process.[22]

Table II-8
NBR: Count of U.S. producers reporting the interchangeability between NBR produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. France	***	***	***	***
United States vs. Korea	***	***	***	***
United States vs. Mexico	***	***	***	***
France vs. Korea	***	***	***	***
France vs. Mexico	***	***	***	***
Korea vs. Mexico	***	***	***	***
United States vs. Other	***	***	***	***
France vs. Other	***	***	***	***
Korea vs. Other	***	***	***	***

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

[22] Respondent Kumho postconference brief, p. 14.

Table II-9
NBR: Count of importers reporting the interchangeability between NBR produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. France	1	3	1	0
United States vs. Korea	1	3	2	0
United States vs. Mexico	1	2	2	0
France vs. Korea	1	3	1	0
France vs. Mexico	1	3	1	0
Korea vs. Mexico	1	2	1	0
United States vs. Other	1	2	2	0
France vs. Other	1	3	2	0
Korea vs. Other	1	2	3	0

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

In addition, the U.S. producer and importers were asked to assess how often differences other than price were significant in sales of NBR from the United States, subject countries, or nonsubject countries. As seen in tables II-10 and 11, most firms reported that factors other than price are sometimes or never significant when comparing NBR produced from the United States with NBR from subject countries. Importer *** reported that the approval process for NBR is lengthy and faces multiple technical hurdles, so minor differences in performance, process, and quality are significant differences. Importer *** reported that imports from France are at a disadvantage to U.S.-produced NBR because of long lead times and high logistic costs associated with shipping and logistics slowdowns resulting from the COVID-19 pandemic.

Table II-10
NBR: Count of U.S. producers reporting on the significance of differences other than price between NBR produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. France	***	***	***	***
United States vs. Korea	***	***	***	***
United States vs. Mexico	***	***	***	***
France vs. Korea	***	***	***	***
France vs. Mexico	***	***	***	***
Korea vs. Mexico	***	***	***	***
United States vs. Other	***	***	***	***
France vs. Other	***	***	***	***
Korea vs. Other	***	***	***	***

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

Table II-11
NBR: Count of importers reporting on the significance of differences other than price between NBR produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. France	0	2	1	2
United States vs. Korea	0	2	3	1
United States vs. Mexico	0	1	1	2
France vs. Korea	0	1	3	1
France vs. Mexico	0	1	2	2
Korea vs. Mexico	0	1	2	1
United States vs. Other	0	2	2	1
France vs. Other	0	2	3	1
Korea vs. Other	0	2	2	1

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

Part III: U.S. producer's 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, Zeon, that accounted for 100 percent of U.S. production of NBR during 2020.

U.S. producers

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

Table III-1 lists 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 in 2020

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

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

[1] In addition to Zeon, a U.S. producer questionnaire was sent to ***, which confirmed it does not produce NBR domestically. Email from ***, July 6, 2021.

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

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

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

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

As indicated in table III-2, Zeon *** related to foreign producers of the subject merchandise and *** related to U.S. importers of subject merchandise. In addition, as discussed in greater detail below, Zeon *** directly import the subject merchandise and *** purchase the subject merchandise from U.S. importers.

Table III-3 presents U.S. producer Zeon's reported changes in operations since January 1, 2018.

Table III-3
NBR: U.S. producer's reported changes in operations since January 1, 2018.

Item	Firm name and accompanying narrative response
Other	***

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

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. Capacity increased during 2018-19 by *** percent due to ***[2] and *** in subsequent periods.[3] Production decreased by *** percent during 2018-19 and by *** percent during 2019-20, for an overall *** percent decrease during 2018-20.[4] Decreased production coupled with increased capacity resulted in a *** percentage point decrease in capacity utilization from *** percent in 2018 to *** percent in 2020. Production was *** percent higher in interim 2021 than in interim 2020, while capacity ***, hence, capacity utilization was *** percentage points higher in interim 2021 than interim 2020.

Around *** of Zeon's total NBR production consisted of XNBR production throughout the period for which data were collected.

[2] Petitioner's postconference brief, p. 20.

[3] Constraints on Zeon's capacity include ***. Zeon's U.S. producers' questionnaire response, question II-3d.

[4] Zeon ***. Zeon's U.S. producers' questionnaire response, question II-5 and email from ***, July 20, 2021. ***. Zeon's original U.S. producers' questionnaire response, question II-7.

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

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

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Capacity	Quantity	***	***	***	***	***
Production: XNBR	Quantity	***	***	***	***	***
Production: All other NBR	Quantity	***	***	***	***	***
Production: All NBR	Quantity	***	***	***	***	***
Capacity utilization	Ratio	***	***	***	***	***
Production: XNBR	Share	***	***	***	***	***
Production: All other NBR	Share	***	***	***	***	***
Production: All NBR	Share	***	***	***	***	***

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

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

* * * * * * *

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

Alternative products

As shown in table III-5, *** percent of the product produced using the same machinery or workers used to produce NBR during 2020 was in-scope product. Zeon reported production of *** using the same machinery or workers used to produce NBR. Like NBR production, out-of-scope production also decreased during 2018-20, by *** percent, while out-of-scope production was *** percent higher in interim 2021 than in interim 2020.

Zeon reported that ***. With respect to workers, ***.[5]

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

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

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Overall capacity	Quantity	***	***	***	***	***
NBR production	Quantity	***	***	***	***	***
Out-of-scope production: Latex NBR	Quantity	***	***	***	***	***
Out-of-scope production: Other	Quantity	***	***	***	***	***
Out-of-scope production: Total	Quantity	***	***	***	***	***
Total production	Quantity	***	***	***	***	***
Overall capacity utilization	Ratio	***	***	***	***	***
NBR production	Share	***	***	***	***	***
Out-of-scope production: Latex NBR	Share	***	***	***	***	***
Out-of-scope production: Other	Share	***	***	***	***	***
Out-of-scope production: Total	Share	***	***	***	***	***
Total production	Share	***	***	***	***	***

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

Note: "Out-of-scope production: Latex NBR" does not include latex NBR that was used to produce in-scope NBR.

[5] 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. Both U.S. shipments and export shipments decreased during 2018-20, with greater decreases occurring during 2019-20 than 2018-19.

During 2018-20, U.S. shipment quantities and values decreased by *** and *** percent, respectively. U.S. shipment quantities and values decreased by *** and *** percent, respectively, during 2018-19, and decreased by *** and *** percent during 2019-20. U.S. shipment quantities were *** percent higher in interim 2021 than in interim 2020, while U.S. shipment values were *** percent lower.

The share of total shipments (by quantity) accounted for by export shipments ranged from *** to *** percent throughout the period for which data were collected. During 2018-20, export shipment quantities and values decreased by *** and *** percent, respectively. Export shipment quantities and values were higher in interim 2021 than in interim 2020, by *** and *** percent, respectively. Zeon exports domestically produced NBR to ***.[6]

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

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

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

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 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	***	***	***	***	***
U.S. shipments	Share of value	***	***	***	***	***
Export shipments	Share of value	***	***	***	***	***
Total shipments	Share of value	***	***	***	***	***

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

Table III-7 presents U.S. producer Zeon's U.S. shipments by product type.[7] *** percent of Zeon's U.S. shipments, by quantity, consisted of commercial shipments throughout the period for which data were collected. During 2018-20, U.S. commercial shipment quantities and values decreased by *** percent and *** percent, respectively. U.S. commercial shipment quantities were *** percent higher in interim 2021 than interim 2020, while values were *** percent lower.

During 2018-20, U.S. commercial shipments as a share of U.S. shipments decreased by *** percentage points, while internal consumption increased by ***. Internal consumption increased in quantity (*** percent) and value (*** percent) during 2018-20. Zeon internally consumes NBR to produce ***. It also reported *** [8] ***.[9] Internal consumption increased during

[7] ***. Staff notes on July 20, 2021 phone call with Zeon and Zeon's revised U.S. producers' questionnaire, as revised on July 20, 2021.

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

[9] *** 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 U.S. producers' questionnaire, question II-10.

2018-20 because ***.[10]

Except during 2018, internal consumption unit values were higher than U.S. commercial shipment unit values. U.S. commercial shipment unit values decreased by *** percent during 2018-20 and were *** percent lower in interim 2021 than interim 2020, while internal consumption unit values increased by *** percent and were *** percent lower in interim 2021 than interim 2020.

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

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

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 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	***	***	***	***	***
Commercial U.S. shipments	Share of value	***	***	***	***	***
Internal consumption	Share of value	***	***	***	***	***
U.S. shipments	Share of value	***	***	***	***	***

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

[10] 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 its production, U.S. shipments, and total shipments**.** End-of-period inventories increased during 2018-19 by *** percent, then decreased during 2019-20 by *** percent, for an overall increase of *** percent during 2018-20. End-of-period inventories were *** percent lower in interim 2021 than interim 2020. Given the increase in end-of-period inventories, coupled with decreasing U.S. production and total shipments during 2018-20, the inventory ratio to U.S. production and inventory ratio to total shipments both increased, by *** and *** percentage points, respectively.

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

Quantity in 1,000 pounds; inventory ratios in percent

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 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. producer's imports

U.S. producer Zeon's imports of NBR are presented in table III-9. Zeon's imports of NBR (***), decreased by *** percent during 2018-20. However, the decrease in Zeon's U.S. production of NBR was greater during 2018-20, such that the ratio of Zeon's imports to U.S. production increased by *** percentage points. Zeon's imports were *** percent lower in interim 2021 than interim 2020, while Zeon's U.S. NBR production was *** percent higher, resulting in the ratio of Zeon's imports to U.S. production being *** percentage points lower in interim 2021 than interim 2020.

Table III-9
NBR: * U.S. production, U.S. imports, and ratio of imports to production, by source and by period**

Quantity in 1,000 pounds; ratios in percent

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
U.S. production	Quantity	***	***	***	***	***
Imports from nonsubject sources (***)	Quantity	***	***	***	***	***
Imports from nonsubject sources (***) to U.S. production	Ratio	***	***	***	***	***

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

Table III-10
NBR: * reasons for importing**

Item	Firm's narrative response
*** reason for importing	***

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

U.S. employment, wages, and productivity

Table III-11 shows U.S. producer Zeon's employment-related data. Production and related workers (PRWs) increased by *** percent during 2018-20 and returned to 2018 levels during Jan-March 2021.[11] Total hours worked and hours worked per PRW increased from 2018 to 2019, then decreased from 2019 to 2020, resulting in overall decreases during 2018-20. Both were lower in interim 2021 than interim 2020. Wages and hourly wages increased from 2018 to 2020, while production decreased, resulting in decreased productivity by *** pounds per hour and increased unit labor costs by *** per pound. However, productivity in Jan-March 2021 was higher than 2018 levels by *** pounds per hour and unit labor costs were lower in interim 2021 than interim 2020 by *** per pound.

Table III-11
NBR: U.S. producer's employment related data, by item and by period

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 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.

[11] ***. 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 21 firms believed to be importers of subject NBR, as well as to the U.S. producer of NBR.[1] Usable questionnaire responses were received from 16 companies,[2] representing an estimated *** percent of U.S. imports from France, *** U.S. imports from Korea, *** percent of U.S. imports from Mexico,[3] and *** percent of U.S. imports from nonsubject sources in 2020 under HTS subheading 4002.59.00. Unless otherwise noted, data for U.S. imports presented in this report are based on adjusted official import statistics.[4]

Table IV-1 lists all responding U.S. importers of NBR from France, Korea, Mexico, and other sources, their locations, and their shares of U.S. imports, in 2020.

[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 2020.

[2] Three firms, *** certified that they have not imported NBR since January 1, 2018.

[3] Industrias Negromex reports that it is the only NBR producer in Mexico and ***. Respondents Industrias Negromex's and Dynasol's ("Negromex") postconference brief, exh. 1, question 8; Industrias Negromex's foreign producer/exporter questionnaire, questions I-7, II-6a, and II-6b; Dynasol's U.S. importers' questionnaire, question II-7a; and email from ***, July 21, 2021.

[4] Staff decided to use official import statistics due to inconsistencies between import volumes reported in questionnaires and import volumes according to official import statistics. U.S. importer questionnaire respondents were asked to report the quantity and value of out-of-scope product that they imported under HTS subheading 4002.59.00 and these were removed from the official import statistics presented in the report (***). Given these small amounts reported, staff believe that the HTS subheading 4002.59.00 contains relatively small amounts of out-of-scope product. Respondents were also asked if they imported in-scope NBR under another HTS subheading. *** reported importing the following minor quantities of NBR under HTS subheading 4002.99.00: ***.

Table IV-1
NBR: U.S. importers, their headquarters, and share of U.S. imports in 2020, within source, by firm

Shares in percent

Firm	Headquarters	France	Korea	Mexico	Subject sources	Non-subject sources	All import sources
Advance USA	Schaumburg, IL	***	***	***	***	***	***
Americas International	Akron, OH	***	***	***	***	***	***
Arlanxeo USA	Pittsburgh, PA	***	***	***	***	***	***
Armacell	Chapel Hill, NC	***	***	***	***	***	***
ARP Materials	Amherst, NY	***	***	***	***	***	***
Cascadia	Redmond, WA	***	***	***	***	***	***
Dynasol	Houston, TX	***	***	***	***	***	***
HB Chemical	Twinsburg, OH	***	***	***	***	***	***
Intertex	Carrollton, GA	***	***	***	***	***	***
LG Chem America	Atlanta, GA	***	***	***	***	***	***
Milin	Simcoe, ON	***	***	***	***	***	***
Mitsui	White Plains, NY	***	***	***	***	***	***
Omnova	Beachwood, OH	***	***	***	***	***	***
Posco	Anaheim, CA	***	***	***	***	***	***
T.L. Squire	Akron, OH	***	***	***	***	***	***
Zeon	Louisville, KY	***	***	***	***	***	***
All firms	Various	***	***	***	***	***	***

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 “---.”

U.S. imports

Table IV-2 presents data for U.S. imports of NBR from France, Korea, Mexico, and all other sources. Imports from subject and nonsubject sources decreased during 2018-20 by quantity (28.8 and 34.1 percent, respectively) and by value (44.5 and 45.5 percent, respectively). Imports from nonsubject sources and each of the subject sources decreased in both 2018-19 and 2019-20 by quantity and value, with greater decreases occurring during 2019-20.[5] Import quantities and values from subject sources were higher in interim 2021 than interim 2020 (by 17.4 and 20.2 percent, respectively), while import quantities and values from nonsubject sources were lower (by 52.4 and 42.5 percent, respectively).

Average unit values (AUVs) of imports from subject sources were lower than AUVs of nonsubject sources throughout the period for which data were collected. On an individual source basis, the AUVs for France were higher than other individual subject sources in all periods, and higher than aggregated imports from nonsubject sources in 2020. AUVs of imports from subject and nonsubject sources decreased during 2018-20 (by 22.0 and 17.4 percent, respectively), but were both higher in interim 2021 than interim 2020 (by 2.4 and 20.6 percent, respectively). Like import quantities and values, AUVs of imports from subject sources and each of the individual subject sources decreased in both 2018-19 and 2019-20, with greater decreases occurring during 2019-20.[6] AUVs of imports from nonsubject sources followed the same general trend, except for having increased initially in the 2018-19 period.

Approximately two-thirds of imports were from subject sources during 2018-20. Imports from subject sources increased as a share of total imports over each comparison in the data

[5] Importers *** reported that COVID-19 reduced demand in the automotive and oil & gas sectors. ***. Foreign producer *** also noted that COVID-19 reduced U.S. demand, resulting in less exports to the U.S. Several importers also reported supply chain bottlenecks caused by suppliers' reduced production capacity and transportation delays. U.S. importers' questionnaire, question II-2b, and foreign producer/exporter questionnaire, question II-2b.

[6] Staff asked several importers to explain why AUVs were noticeably lower in 2020 compared to previous years. ***. Email from ***, July 20, 2021. ***. Phone call with ***, July 15, 2021 and email from ***, July 14, 2021.

collection period, with the highest share reported in the interim 2021 period, at 86.5 percent. In 2018, imports from Korea accounted for the greatest share of subject imports by quantity, followed by imports from France. Given that imports from Korea declined by a greater percentage than any other source during 2018-20 (41.8 percent by quantity and 61.1 percent by value), imports from France accounted for the greatest share of subject imports by 2020.

During 2018-20, the ratio of subject imports to U.S. production increased from *** to *** percent. The ratio of nonsubject imports to U.S. production also increased, from *** to *** percent in this same period. However, the ratio of subject imports to U.S. production further increased in interim 2021 to *** percent, while the ratio of nonsubject imports to U.S. production decreased to *** percent.

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

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

Source	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
France	Quantity	30,883	30,202	25,182	7,735	9,036
Korea	Quantity	33,224	30,120	19,323	5,335	8,061
Mexico	Quantity	18,539	17,651	14,312	4,549	3,585
Subject sources	Quantity	82,646	77,973	58,817	17,619	20,683
Nonsubject sources	Quantity	40,520	38,034	26,716	6,786	3,232
All import sources	Quantity	123,166	116,006	85,534	24,405	23,914
France	Value	41,541	40,259	30,158	10,085	11,330
Korea	Value	38,765	29,788	15,076	4,575	7,576
Mexico	Value	21,289	17,029	11,180	4,085	3,634
Subject sources	Value	101,594	87,076	56,413	18,745	22,539
Nonsubject sources	Value	55,869	55,718	30,424	8,533	4,903
All import sources	Value	157,464	142,794	86,837	27,278	27,442
France	Unit value	1.35	1.33	1.20	1.30	1.25
Korea	Unit value	1.17	0.99	0.78	0.86	0.94
Mexico	Unit value	1.15	0.96	0.78	0.90	1.01
Subject sources	Unit value	1.23	1.12	0.96	1.06	1.09
Nonsubject sources	Unit value	1.38	1.46	1.14	1.26	1.52
All import sources	Unit value	1.28	1.23	1.02	1.12	1.15

Table continued on next page.

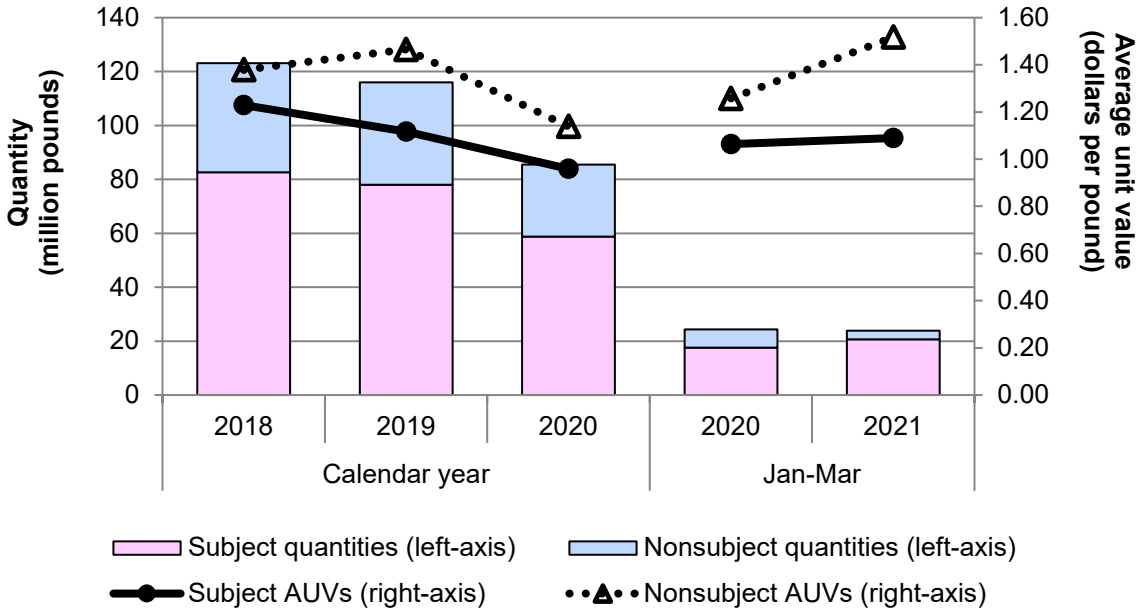
Table IV-2 Continued
NBR: Share of U.S. imports, by source and by period

Shares in percent; ratios in percent representing U.S. imports relative to overall U.S. production in percent

Source	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
France	Share of quantity	25.1	26.0	29.4	31.7	37.8
Korea	Share of quantity	27.0	26.0	22.6	21.9	33.7
Mexico	Share of quantity	15.1	15.2	16.7	18.6	15.0
Subject sources	Share of quantity	67.1	67.2	68.8	72.2	86.5
Nonsubject sources	Share of quantity	32.9	32.8	31.2	27.8	13.5
All import sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
France	Share of value	26.4	28.2	34.7	37.0	41.3
Korea	Share of value	24.6	20.9	17.4	16.8	27.6
Mexico	Share of value	13.5	11.9	12.9	15.0	13.2
Subject sources	Share of value	64.5	61.0	65.0	68.7	82.1
Nonsubject sources	Share of value	35.5	39.0	35.0	31.3	17.9
All import sources	Share of value	100.0	100.0	100.0	100.0	100.0
France	Ratio	***	***	***	***	***
Korea	Ratio	***	***	***	***	***
Mexico	Ratio	***	***	***	***	***
Subject sources	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out-of-scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series. Value data are based on landed duty paid values.

Figure IV-1
NBR: U.S. imports quantity and average unit value, by source and by period



Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out-of-scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series.

U.S. imports of XNBR and all other NBR

Table IV-3 presents data for U.S. imports from all sources of XNBR and all other NBR. XNBR accounted for ***, by quantity, of total imports throughout the period for which data were collected. From January 2018 to March 2021, *** percent of XNBR imports came from subject sources (***) and *** percent of XNBR imports came from nonsubject sources (imported by ***). AUVs of XNBR imports were consistently higher than AUVs of all other NBR imports (between *** and *** percent higher during 2018-20).

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; shares in percent

Product type	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
XNBR	Quantity	***	***	***	***	***
All other NBR	Quantity	***	***	***	***	***
All NBR	Quantity	123,166	116,006	85,534	24,405	23,914
XNBR	Value	***	***	***	***	***
All other NBR	Value	***	***	***	***	***
All NBR	Value	157,464	142,794	86,837	27,278	27,442
XNBR	Unit Value	***	***	***	***	***
All other NBR	Unit Value	***	***	***	***	***
All NBR	Unit Value	1.28	1.23	1.02	1.12	1.15
XNBR	Share of Quantity	***	***	***	***	***
All other NBR	Share of Quantity	***	***	***	***	***
All NBR	Share of Quantity	100.0	100.0	100.0	100.0	100.0
XNBR	Share of Value	***	***	***	***	***
All other NBR	Share of Value	***	***	***	***	***
All NBR	Share of Value	100.0	100.0	100.0	100.0	100.0

Source: XNBR import data were compiled from data submitted in response to Commission questionnaires. All other NBR import data were calculated by subtracting XNBR import data from data compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out of scope imports as reported in Commission questionnaires.

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[7] 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.[8] Imports from France accounted for 31.9 percent, imports from Korea accounted for 28.3 percent, and imports from Mexico accounted for 16.0 percent of total imports of NBR by quantity during 2020.

Table IV-4
NBR: U.S. imports in the twelve-month period preceding the filing of the petition (i.e., June 2020 through May 2021), by source

Quantity in 1,000 pounds; share in percent

Source of imports	Quantity	Share of quantity
France	25,878	31.9
Korea	22,978	28.3
Mexico	13,013	16.0
Subject sources	61,869	76.2
Nonsubject sources	19,350	23.8
All import sources	81,219	100.0

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out of scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series.

[7] 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)).

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

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

Table IV-5 and figure IV-2 present shares of the U.S. producer's and U.S. importers' U.S. shipments by acrylonitrile ("ACN") content.[9] As shown in table IV-5, U.S. shipments of NBR from *** were reported as having ACN content that were within all three ranges specified (less than 26 percent, between 26 and 41 percent, and greater than 41 percent), while U.S. shipments from *** were reported as having ACN content ranges of either less than 26 percent or between 26 to 41 percent. NBR with ACN content between 26 and 41 percent represented the majority of U.S. shipments for each source. U.S. importers' shipments from France accounted for the most U.S. shipments of NBR with less than 26 percent ACN content (*** percent), as well as the most U.S. shipments of NBR with more than 41 percent ACN content (*** percent).

[9] These data do not include ***.

Table IV-5
NBR: Quantity of U.S. producer's and U.S. importers' U.S. shipments in 2020, by ACN content and by source

Quantity in 1,000 pounds

Source	< 26% ACN	26% to 41% ACN	> 41% ACN	All ACN content
U.S. producer	***	***	***	***
France	***	***	***	***
Korea	***	***	***	***
Mexico	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Table continued.

Table IV-5 Continued
NBR: Share of U.S. producer's and U.S. importers' U.S. shipments in 2020 within source, by ACN content

Share across in percent

Source	< 26% ACN	26% to 41% ACN	> 41% ACN	All ACN content
U.S. producer	***	***	***	***
France	***	***	***	***
Korea	***	***	***	***
Mexico	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Table continued.

Table IV-5 Continued
NBR: Share of U.S. producer's and U.S. importers' U.S. shipments in 2020 within ACN content, by source

Share down in percent

Source	< 26% ACN	26% to 41% ACN	> 41% ACN	All ACN content
U.S. producer	***	***	***	***
France	***	***	***	***
Korea	***	***	***	***
Mexico	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

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

Figure IV-2
NBR: Share of U.S. producer's and U.S. importers' U.S. shipments in 2020 within source, by ACN content

* * * * * * *

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

Table IV-6 and figure IV-3 present shares of the U.S. producer's and U.S. importers' U.S. shipments by form: (1) bale/slab; (2) ground, particulate, pellet, or powder; and (3) liquid.[10] As shown in table IV-6, NBR in bale/slab form represented the majority or all *** of U.S. shipments for each source. U.S. shipments in ground, particulate, pellet, or powder form were reported from all sources, except for ***. Only *** reported U.S. shipments in liquid form.

[10] As noted in footnote 9, these data do not include ***.

Table IV-6
NBR: Quantity of U.S. producer's and U.S. importers' U.S. shipments in 2020, by form and by source

Quantity in 1,000 pounds

Source	Bale / slab	Ground / powder	Liquid	All forms
U.S. producer	***	***	***	***
France	***	***	***	***
Korea	***	***	***	***
Mexico	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Table continued.

Table IV-6 Continued
NBR: Share of quantity of U.S. producer's and U.S. importers' U.S. shipments in 2020 within source, by form

Share across in percent

Source	Bale / slab	Ground / powder	Liquid	All forms
U.S. producer	***	***	***	***
France	***	***	***	***
Korea	***	***	***	***
Mexico	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Table continued.

Table IV-6 Continued
NBR: Share of quantity of U.S. producer's and U.S. importers' U.S. shipments in 2020 within form, by source

Share down in percent

Source	Bale / slab	Ground / powder	Liquid	All forms
U.S. producer	***	***	***	***
France	***	***	***	***
Korea	***	***	***	***
Mexico	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires. The ground/powder category also includes particulates and pellets. Liquid is reported in gross weight.

Figure IV-3
NBR: Share of quantity of U.S. producer's and U.S. importers' U.S. shipments in 2020 within source, by form

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires. The ground/powder category also includes particulates and pellets. Liquid is reported in gross weight.

Geographical markets

Table IV-7 presents the quantity and shares of U.S. imports of NBR in 2020 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 and the majority of NBR imports from France entered through ports located in the East.

Table IV-7
NBR: Quantity of U.S. imports in 2020, by border of entry and by source

Quantity in 1,000 pounds

Source	East	North	South	West	All borders
France	19,996	619	4,568	---	25,182
Korea	7,727	5,040	333	6,236	19,336
Mexico	7	---	14,304	1	14,312
Subject sources	27,729	5,659	19,205	6,237	58,830
Nonsubject sources	5,229	14,647	6,782	438	27,095
All import sources	32,958	20,306	25,987	6,675	85,926

Table continued.

Table IV-7 Continued
NBR: Share of quantity of U.S. imports in 2020 within source, by border of entry

Share across in percent

Source	East	North	South	West	All borders
France	79.4	2.5	18.1	---	100.0
Korea	40.0	26.1	1.7	32.2	100.0
Mexico	0.0	---	99.9	0.0	100.0
Subject sources	47.1	9.6	32.6	10.6	100.0
Nonsubject sources	19.3	54.1	25.0	1.6	100.0
All import sources	38.4	23.6	30.2	7.8	100.0

Table continued.

Table IV-7 Continued
NBR: Share of quantity of U.S. imports in 2020 within border of entry, by source

Share down in percent

Source	East	North	South	West	All borders
France	60.7	3.0	17.6	---	29.3
Korea	23.4	24.8	1.3	93.4	22.5
Mexico	0.0	---	55.0	0.0	16.7
Subject sources	84.1	27.9	73.9	93.4	68.5
Nonsubject sources	15.9	72.1	26.1	6.6	31.5
All import sources	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021. Imports are based on the imports for consumption data series.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Presence in the market

Table IV-8 and figures IV-4 and IV-5 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 2018 to May 2021.

Table IV-8
NBR: Quantity of U.S. imports, by year, by month, and by source

Quantity in 1,000 pounds

Year	Month	France	Korea	Mexico	Subject sources	Nonsubject sources	All import sources
2018	January	1,447	2,293	1,606	5,346	2,442	7,788
2018	February	3,173	2,599	670	6,442	2,377	8,820
2018	March	2,540	3,130	1,788	7,458	4,699	12,157
2018	April	3,561	3,817	2,399	9,776	5,429	15,205
2018	May	2,814	2,799	794	6,407	2,643	9,050
2018	June	2,055	3,195	1,167	6,418	3,587	10,005
2018	July	4,455	2,626	1,388	8,469	3,497	11,966
2018	August	2,475	2,468	1,524	6,468	2,758	9,226
2018	September	1,292	1,299	1,786	4,376	3,594	7,971
2018	October	2,505	4,296	2,483	9,284	3,176	12,460
2018	November	3,000	2,386	1,718	7,104	4,119	11,223
2018	December	1,567	2,342	1,215	5,124	2,396	7,520
2019	January	4,131	3,123	1,738	8,992	3,308	12,300
2019	February	1,315	1,875	1,931	5,120	3,560	8,680
2019	March	3,365	3,969	1,439	8,773	4,507	13,280
2019	April	2,763	2,368	1,018	6,149	6,801	12,950
2019	May	3,868	2,740	1,840	8,448	3,296	11,744
2019	June	1,988	3,014	1,449	6,451	2,674	9,125
2019	July	958	3,623	979	5,559	2,703	8,262
2019	August	2,023	1,786	856	4,665	2,738	7,403
2019	September	3,364	1,700	1,325	6,389	2,589	8,978
2019	October	1,954	1,976	1,881	5,810	2,264	8,075
2019	November	1,905	2,201	1,842	5,947	1,754	7,701
2019	December	2,568	1,775	1,354	5,697	1,979	7,676

Table continued on next page.

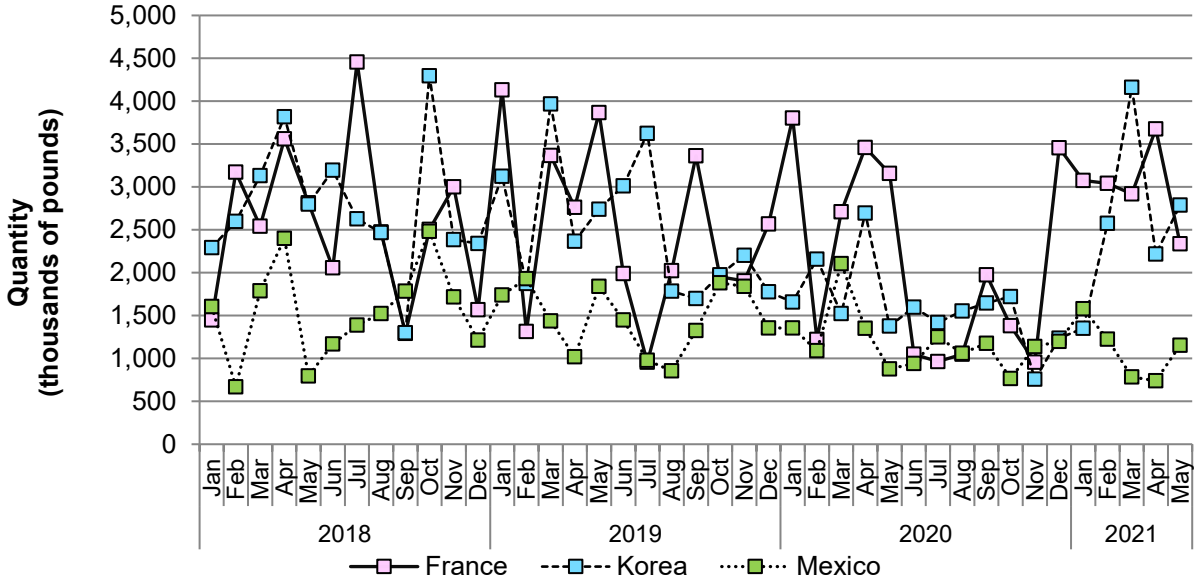
Table IV-8 Continued
NBR: Quantity of U.S. imports, by year, by month, and by source

Quantity in 1,000 pounds

Year	Month	France	Korea	Mexico	Subject sources	Nonsubject sources	All import sources
2020	January	3,803	1,656	1,355	6,814	1,914	8,728
2020	February	1,222	2,158	1,090	4,470	2,795	7,265
2020	March	2,709	1,521	2,105	6,335	2,129	8,465
2020	April	3,461	2,696	1,353	7,510	3,999	11,509
2020	May	3,157	1,379	876	5,412	4,830	10,242
2020	June	1,048	1,596	942	3,586	2,388	5,974
2020	July	963	1,418	1,252	3,633	1,648	5,281
2020	August	1,050	1,552	1,061	3,663	1,989	5,652
2020	September	1,975	1,645	1,175	4,795	1,933	6,728
2020	October	1,380	1,723	765	3,868	783	4,652
2020	November	956	757	1,140	2,854	1,412	4,265
2020	December	3,457	1,235	1,199	5,890	1,274	7,165
2021	January	3,076	1,352	1,580	6,007	1,308	7,315
2021	February	3,043	2,576	1,223	6,842	556	7,398
2021	March	2,918	4,160	783	7,860	1,406	9,266
2021	April	3,676	2,217	740	6,633	2,093	8,726
2021	May	2,336	2,788	1,153	6,277	2,688	8,965

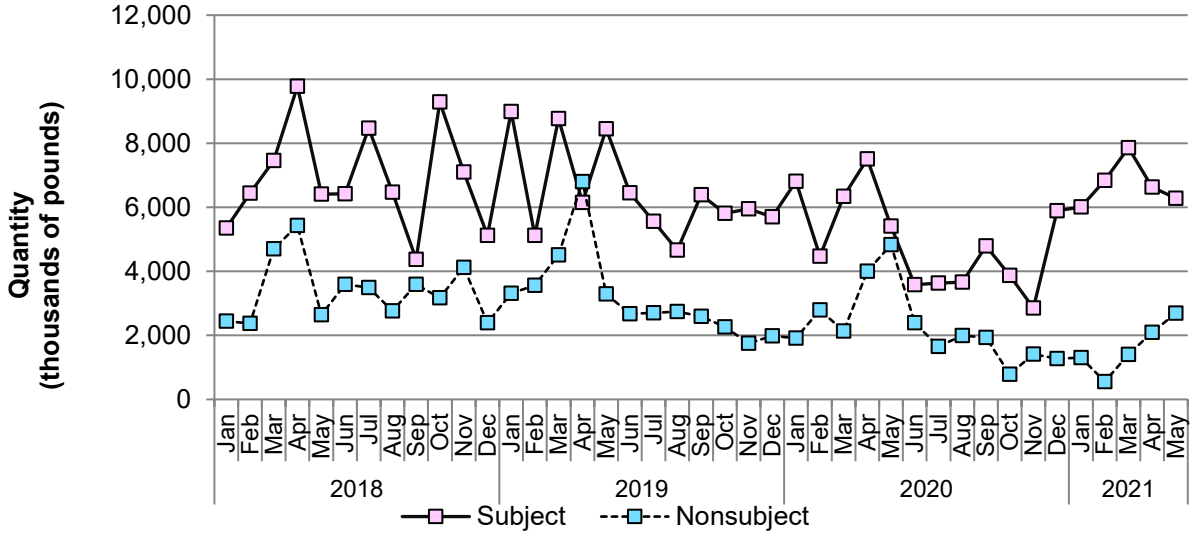
Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021. Imports are based on the imports for consumption data series.

Figure IV-4
NBR: U.S. imports from individual subject sources, by year, by month, and by source



Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021. Imports are based on the imports for consumption data series.

Figure IV-5
NBR: U.S. imports from aggregated subject and nonsubject sources, by year, by month, and by source



Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021. Imports are based on the imports for consumption data series.

Apparent U.S. consumption

Table IV-9 and figure IV-6 present data on apparent U.S. consumption for NBR. Apparent U.S. consumption decreased during 2018-19 by *** percent in quantity and *** percent in value. Apparent U.S. consumption further decreased during 2019-20 by *** percent in quantity and *** percent in value, for a total decrease during 2018-20 of *** percent in quantity and *** percent in value. Apparent U.S. consumption was *** percent lower in quantity and *** percent lower in value in interim 2021 than interim 2020.

Table IV-9
NBR: Apparent U.S. consumption, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars

Source	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
U.S. producer	Quantity	***	***	***	***	***
France	Quantity	30,883	30,202	25,182	7,735	9,036
Korea	Quantity	33,224	30,120	19,323	5,335	8,061
Mexico	Quantity	18,539	17,651	14,312	4,549	3,585
Subject sources	Quantity	82,646	77,973	58,817	17,619	20,683
Nonsubject sources	Quantity	40,520	38,034	26,716	6,786	3,232
All import sources	Quantity	123,166	116,006	85,534	24,405	23,914
All sources	Quantity	***	***	***	***	***
U.S. producer	Value	***	***	***	***	***
France	Value	41,541	40,259	30,158	10,085	11,330
Korea	Value	38,765	29,788	15,076	4,575	7,576
Mexico	Value	21,289	17,029	11,180	4,085	3,634
Subject sources	Value	101,594	87,076	56,413	18,745	22,539
Nonsubject sources	Value	55,869	55,718	30,424	8,533	4,903
All import sources	Value	157,464	142,794	86,837	27,278	27,442
All sources	Value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out of scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series. Value data are based on landed, duty-paid values.

Figure IV-6
NBR: Apparent U.S. consumption, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out of scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series. Value data are based on landed, duty-paid value.

U.S. market shares

U.S. market share data are presented in table IV-10. Subject imports accounted for the majority of the U.S. market during 2018-20, at around *** percent, followed by imports from nonsubject sources, which accounted for around *** percent of the market. Lastly, the U.S. producer's U.S. shipments account for around *** percent of the market.

By quantity, U.S. imports from France and Mexico and U.S. producer Zeon's U.S. shipments each increased in market share during 2018-20, by ***, ***, and *** percentage points, respectively. Conversely, market share of U.S. imports from Korea and nonsubject sources decreased by *** and *** percentage points, respectively. Market share by quantity was higher in interim 2021 than interim 2020 for all sources, except for imports from Mexico and nonsubject sources, which were *** and *** percentage points lower, respectively, in interim 2021.

By value, U.S. imports from France and U.S. producer Zeon's U.S. shipments increased in market share during 2018-20, by *** and *** percentage points, respectively. Conversely, market share of U.S. imports from Korea, Mexico, and nonsubject sources decreased by ***, ***, and ***, respectively. Market share by value was higher in interim 2021 than interim 2020 for imports from Korea (*** percentage points) and France (*** percentage points), and lower in interim 2021 for imports from Mexico (*** percentage points), nonsubject sources (*** percentage points) and U.S. producer Zeon's U.S. shipments (*** percentage points).

Table IV-10
NBR: Market shares, by source and period

Shares in percent

Source	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
U.S. producer	Share of quantity	***	***	***	***	***
France	Share of quantity	***	***	***	***	***
Korea	Share of quantity	***	***	***	***	***
Mexico	Share of quantity	***	***	***	***	***
Subject sources	Share of quantity	***	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***	***
All import sources	Share of quantity	***	***	***	***	***
All sources	Share of quantity	***	***	***	***	***
U.S. producer	Share of value	***	***	***	***	***
France	Share of value	***	***	***	***	***
Korea	Share of value	***	***	***	***	***
Mexico	Share of value	***	***	***	***	***
Subject sources	Share of value	***	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***	***
All import sources	Share of value	***	***	***	***	***
All sources	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out of scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series. Value data are based on landed, duty-paid value.

Part V: Pricing data

Factors affecting prices

Raw material costs

Major raw materials for NBR include monomers acrylonitrile and 1,3-butadiene ("butadiene").[1] U.S. producer Zeon reported that its raw material costs as a share of COGS *** from *** percent in 2018 to *** percent in 2020. Acrylonitrile and butadiene prices increased during 2018, decreased in 2019 and through mid-2020, and increased to above 2018 levels in 2021, with a large spike in acrylonitrile prices in March 2021 (figure V-1 and table V-1). Respondent Negromex stated that the price increases in 2018 were due to unplanned outages.[2]

Respondent Negromex estimated that 75 percent of the cost of raw materials is attributable to acrylonitrile and butadiene.[3] Prices for NBR incorporate acrylonitrile and butadiene monomer index prices and conversion costs.[4] Petitioner stated that conversion costs change on less than a quarterly basis and that the average monomer cost was stable from 2018 to 2020, increasing during 2018 and decreasing in 2019 and 2020.[5]

[1] Petition, p. 9.

[2] Conference transcript, pp. 114-115 (Quintero).

[3] Conference transcript, p. 114 (Quintero).

[4] Conference transcript, p. 28 (Dalton); Petitioner's postconference brief, pp. 17, 22-23. Petitioner Zeon stated that it relies on Chemical Data, LLC for the acrylonitrile and butadiene monomer indices in North America, S&P Platts data for the market in Korea, and the AEGIS market data for the market in Europe. Conference transcript, pp. 74-75 (Cail).

[5] Conference transcript, pp. 28-29 (Dalton); Petitioner's postconference brief, p. 23.

Figure V-1
Raw materials: Prices of acrylonitrile, *, and butadiene, ***, cents per pound, monthly, January 2018-June 2021**

Price in cents per pound

* * * * * * *

Source: *** data provided by Respondent Negromex, July 29, 2021.

Table V-1
Raw materials: Prices of *, cents per pound, monthly, by raw material, January 2018-June 2021**

Price in cents per pound

Year	Month	Acrylonitrile price	Butadiene price
2018	January	***	***
2018	February	***	***
2018	March	***	***
2018	April	***	***
2018	May	***	***
2018	June	***	***
2018	July	***	***
2018	August	***	***
2018	September	***	***
2018	October	***	***
2018	November	***	***
2018	December	***	***
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	***	***

Source: *** data provided by Respondent Negromex, July 29, 2021.

Transportation costs to the U.S. market

Transportation costs for NBR shipped from subject countries to the United States averaged 6.8 percent of NBR customs value of imports from France, 14.3 from Korea, and 2.6 from Mexico during 2020. These estimates were derived from official import data and represent the transportation and other charges on imports.[6]

U.S. inland transportation costs

U.S. producer Zeon reported that *** for transportation. The majority of importers (7 of 13) reported that their purchasers typically arrange for transportation of their NBR purchases. U.S. producer Zeon reported that their U.S. inland transportation costs were *** percent of total cost. Importers reported that U.S. transportation costs ranged from less than 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

Method	U.S. producer	U.S. importers
Transaction-by-transaction	***	12
Contract	***	6
Set price list	***	2
Other	***	4
Responding firms	1	14

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.

[6] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2020 and then dividing by the customs value based on the HTS statistical reporting number 7303.00.0030.

U.S. producer Zeon stated that the majority of its sales are spot sales.[7] Importers also reported selling a large share of their NBR through spot sales (table V-3). The remaining shipments of U.S.-produced NBR are sold through ***. Three importers reported sales through annual contracts and two reported sales through long-term contracts. All three responding importers reported that prices were indexed to raw material prices. 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.[8] Importer *** reported that contracts with its customers adjust prices on a quarterly basis based on the Platt 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, 2020

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.

Sales terms and discounts

U.S. producer Zeon typically quotes prices on *** and four of seven importers typically quote prices on a delivered basis. Zeon reported *** discounts. Most importers (11 of 14) reported no discount policies. Importers *** reported quantity and total volume discounts and importer *** reported that it has *** but does not offer discounts to other customers.

[7] Conference transcript, p. 75 (Cail).
[8] Conference transcript, p. 76 (Cail).

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 2018-March 2021.

Product 1.-- Commodity NBR with Acrylonitrile content ranging from 26 percent to 41 percent and Mooney Viscosity of 30 to 80, sold in bales or slabs ranging from 25-45 kgs.

Product 2.-- Specialty NBR with Acrylonitrile content less than 26 percent or greater than 41 percent; Hot Polymerized, and/or containing methacrylic acid, sold in bales or slabs ranging from 25-45 kgs.

Product 3.-- Commodity NBR with Acrylonitrile content ranging from 26 percent to 41 percent and Mooney Viscosity of 30 to 80, ground/particulate/pellet form, sold in 20-30 kg bags.

Product 4.-- Specialty NBR with Acrylonitrile content less than 26 percent or greater than 41 percent; Hot Polymerized, and/or containing methacrylic acid, ground/particulate/pellet form, sold in 20-30 kg bags.

U.S. producer Zeon and seven importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[9] No importers reported pricing data for product 3 from Korea or product 4 from any source. Pricing data reported by these firms accounted for *** of U.S. producer's shipments of NBR, *** of U.S. shipments of subject imports from France, *** percent of subject imports from Korea, and *** subject imports from Mexico during January 2018-March 2021.[10]

Price data for products 1-4 are presented in tables V-4 to V-7 and figures V-2 to V-5.

[9] 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.

[10] 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; periods in quarters

Period	U.S. price	U.S. quantity	France price	France quantity	France margin	Korea price	Korea quantity	Korea margin
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***

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; periods in quarters

Period	U.S. price	U.S. quantity	Mexico price	Mexico quantity	Mexico margin	Subject price	Subject quantity	Subject margin
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***

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

Note: Product 1: Commodity NBR with Acrylonitrile content ranging from 26% to 41% and Mooney Viscosity of 30 to 80, 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; periods in quarters

Period	U.S. price	U.S. quantity	France price	France quantity	France margin	Korea price	Korea quantity	Korea margin
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***

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; periods in quarters

Period	U.S. price	U.S. quantity	Mexico price	Mexico quantity	Mexico margin	Subject price	Subject quantity	Subject margin
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***

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

Note: Product 2: Specialty NBR with Acrylonitrile content less than 26% or greater than 41%; Hot Polymerized, and/or containing methacrylic acid, sold in bales or slabs ranging from 25-45 kgs.
Note: The *** price for pricing product 2 from Mexico during Q4 2020 may be attributable to the *** during that period.

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; periods in quarters

Period	U.S. price	U.S. quantity	France price	France quantity	France margin	Mexico price	Mexico quantity	Mexico margin
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***

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; periods in quarters

Period	U.S. price	U.S. quantity	Subject price	Subject quantity	Subject margin
2018 Q1	***	***	***	***	***
2018 Q2	***	***	***	***	***
2018 Q3	***	***	***	***	***
2018 Q4	***	***	***	***	***
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***

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

Note: Product 3: Commodity NBR with Acrylonitrile content ranging from 26% to 41% and Mooney Viscosity of 30 to 80, ground/particulate/pellet form, sold in 20-30 kg bags.
Note: U.S. producer Zeon reported ***. See staff email with Zeon, August 6, 2021.

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; periods in quarters

Period	U.S. price	U.S. quantity
2018 Q1	***	***
2018 Q2	***	***
2018 Q3	***	***
2018 Q4	***	***
2019 Q1	***	***
2019 Q2	***	***
2019 Q3	***	***
2019 Q4	***	***
2020 Q1	***	***
2020 Q2	***	***
2020 Q3	***	***
2020 Q4	***	***
2021 Q1	***	***

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-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: Commodity NBR with Acrylonitrile content ranging from 26% to 41% and Mooney Viscosity of 30 to 80, 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: Specialty NBR with Acrylonitrile content less than 26% or greater than 41%; Hot Polymerized, and/or containing methacrylic acid, sold in bales or slabs ranging from 25-45 kgs.

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: Commodity NBR with Acrylonitrile content ranging from 26% to 41% and Mooney Viscosity of 30 to 80, ground/particulate/pellet form, sold in 20-30 kg bags.

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.

Price trends

In general, prices decreased during January 2018-March 2021. Table V-8 summarizes the price trends, by country and by product. As shown in the table, domestic price decreases ranged from *** percent to *** percent during January 2018-March 2021 while import price decreases ranged from *** percent to *** percent.

Table V-8
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	***	***	***	***	***	***	***
Product 1	France	***	***	***	***	***	***	***
Product 1	Korea	***	***	***	***	***	***	***
Product 1	Mexico	***	***	***	***	***	***	***
Product 2	United States	***	***	***	***	***	***	***
Product 2	France	***	***	***	***	***	***	***
Product 2	Korea	***	***	***	***	***	***	***
Product 2	Mexico	***	***	***	***	***	***	***
Product 3	United States	***	***	***	***	***	***	***
Product 3	France	***	***	***	***	***	***	***
Product 3	Korea	***	***	***	***	***	***	***
Product 3	Mexico	***	***	***	***	***	***	***
Product 4	United States	***	***	***	***	***	***	***
Product 4	France	***	***	***	***	***	***	***
Product 4	Korea	***	***	***	***	***	***	***
Product 4	Mexico	***	***	***	***	***	***	***

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

Note: Percent change column is percentage change from the first quarter 2018 to the first quarter of 2021.

Price comparisons

As shown in table V-9 to V-12, prices for product imported from subject sources were below those for U.S.-produced product in 72 of 98 instances (*** pounds); margins of underselling ranged from *** percent to *** percent. In the remaining 26 instances (*** pounds), prices for product from France, Korea, and Mexico were between *** percent and *** percent above prices for the domestic product.

Table V-9
NBR: Instances of underselling and the range and average of margins, by product

Quantity in 1,000 pounds; margin in percent

Item	Number of quarters	Quantity	Average margin	Minimum margin	Maximum margin
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Product 3	***	***	***	***	***
Product 4	***	***	***	***	***
Total, underselling	72	***	***	***	***

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-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	***	***	***	***	***
Korea	***	***	***	***	***
Mexico	***	***	***	***	***
Total, underselling	72	***	***	***	***

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 product

Quantity in 1,000 pounds; margins and differentials in percent

Item	Number of quarters	Quantity	Average margin	Minimum margin	Maximum margin
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Product 3	***	***	***	***	***
Product 4	***	***	***	***	***
Total, overselling	26	***	***	***	***

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: Instances of overselling and the range and average of margins, by source

Quantity in 1,000 pounds; margins and differentials in percent

Item	Number of quarters	Quantity	Average margin	Minimum margin	Maximum margin
France	***	***	***	***	***
Korea	***	***	***	***	***
Mexico	***	***	***	***	***
Total, overselling	26	***	***	***	***

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.

Lost sales and lost revenue

U.S. producer Zeon reported that it had to ***. Zeon identified *** firms with which they lost sales or revenue (*** consisting lost sales allegations, *** consisting of lost revenue allegations, and *** consisting of both types of allegations). *** allegations included France, *** allegations included Korea, and *** included Mexico. Staff contacted *** purchasers and received responses from 11 purchasers. Responding purchasers reported purchasing *** pounds of NBR and importing *** pounds of NBR during 2018-20 (table V-13).

Table V-13
NBR: Purchasers' reported purchases and imports, by firm, 2018-20

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.

During 2020, responding purchasers purchased *** percent from the U.S. producer, *** percent from France, *** percent from Korea, and *** percent from Mexico; *** percent of purchases were from nonsubject countries. Purchasers were asked about changes in their purchasing patterns from different sources since 2018. Of the responding purchasers, three reported decreasing purchases from the domestic producer, one reported increasing purchases, one reported no change, two reported fluctuating purchases, and four did not purchase any domestic product.[11] Explanations for decreasing purchases of domestic product included changes in customer demand, COVID-19 related issues, and purchaser *** reported that it would spot buy Zeon's U.S.-produced NBR when its NBR supply from Japan was short. Explanations for increasing purchases of domestic product included business growth.

Of the 11 responding purchasers, 6 reported that, since 2018, they had purchased imported NBR from France, Korea, and/or Mexico instead of U.S.-produced product. Four of these purchasers reported that subject import prices were lower than U.S.-produced product, and one of these purchasers reported that price was a primary reason for the decision to purchase imported product from *** rather than U.S.-produced product. This purchaser

[11] No purchasers reported that they did not know the source of the NBR that they purchased.

estimated the quantity of NBR from *** purchased instead of domestic product was *** pounds (tables V-14 and V-15). Purchasers identified availability, customer specifications, technical criteria, and diversification of supply as non-price reasons for purchasing imported rather than U.S.-produced product.

Of the 11 responding purchasers, two reported that the U.S. producer had reduced prices in order to compete with lower-priced imports from France, Korea, and/or Mexico; five reported that Zeon did not lower prices; and three reported that they did not know (tables V-15 and V-16). Purchaser *** reported a *** from Zeon.

In responding to the lost sales lost revenue survey, some purchasers provided additional information on purchases and market dynamics, as well as reasons for sourcing from particular producers (table V-17). Two purchasers reported that they source NBR from Japan, one purchaser reported that it prefers Kumho (Korea) for their long-term business relationship, one reported shifting its purchases from Mexico to Korea, while another reported that Kumho has been an inconsistent supplier. One purchaser reported that the NBR grades that it required are unavailable in the United States.

Table V-14
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--6; No--5	Yes--4; No--1	Yes--1; No--4	***	NA

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

Table V-15
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	6	2	---	***
Korea	5	3	1	***
Mexico	5	1	---	***
Subject sources	6	4	1	***

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

Table V-16
NBR: Purchasers' responses to U.S. producer price reductions, by firm

Firm	Producer lowered prices	Price reduction	Explanation
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
All firms	Yes--2; No--5; Don't Know--3	***	NA

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

Table V-17
NBR: Purchasers' responses to U.S. producer price reductions, by country

Source	Producer lowered prices	Average price reduction	Range of price reductions
France	***	***	***
Korea	***	***	***
Mexico	***	***	***
Subject sources	***	***	***

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

In responding to the lost sales lost revenue survey, some purchasers provided additional information on purchases and market dynamics (table V-13).

Table V-18
NBR: Purchasers' additional explanations

Firm	Additional explanations
***	***
***	***

Table continued on next page.

Table V-18
NBR: Purchasers' additional explanations

Firm	Additional explanations
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***

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

Part VI: Financial experience of U.S. producers

Background

The sole U.S. producer, Zeon, provided usable financial results on its NBR operations. Zeon's financial results were reported on a calendar-year basis. The company's data were reported on the basis of Generally Accepted Accounting Principles ("GAAP").

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 average unit values ("AUVs").

Table VI-1
NBR: Results of operations of U.S. producer, by item and period

Quantity in 1,000 pounds; value in 1,000 dollars; ratios in percent and represent ratios to net sales value

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Commercial sales	Quantity	***	***	***	***	***
Internal consumption	Quantity	***	***	***	***	***
Total net sales	Quantity	***	***	***	***	***
Commercial sales	Value	***	***	***	***	***
Internal consumption	Value	***	***	***	***	***
Total net sales	Value	***	***	***	***	***
Raw material costs	Value	***	***	***	***	***
Direct labor costs	Value	***	***	***	***	***
Other factory costs	Value	***	***	***	***	***
Cost of goods sold	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Interest expense/(income), net	Value	***	***	***	***	***
All other expenses/(income), net	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
Raw material costs	Ratio	***	***	***	***	***
Direct labor costs	Ratio	***	***	***	***	***
Other factory costs	Ratio	***	***	***	***	***
Cost of goods sold	Ratio	***	***	***	***	***
Gross profit	Ratio	***	***	***	***	***
SG&A expense	Ratio	***	***	***	***	***
Operating income or (loss)	Ratio	***	***	***	***	***
Net income or (loss)	Ratio	***	***	***	***	***

Table continued on next page.

Table VI-1 Continued
NBR: Results of operations of U.S. producer, by item and period

Shares in percent and represent share of cost of goods sold; unit values in dollars per pound; count in number of firms reporting

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Raw material costs	Share	***	***	***	***	***
Direct labor costs	Share	***	***	***	***	***
Other factory costs	Share	***	***	***	***	***
Cost of goods sold	Share	***	***	***	***	***
Commercial sales	Unit value	***	***	***	***	***
Internal consumption	Unit value	***	***	***	***	***
Total net sales	Unit value	***	***	***	***	***
Raw material costs	Unit value	***	***	***	***	***
Direct labor costs	Unit value	***	***	***	***	***
Other factory costs	Unit value	***	***	***	***	***
Cost of goods sold	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.

Table VI-2
NBR: Changes in AUVs between comparison periods

Changes in percent

Item	2018-20	2018-19	2019-20	Jan-Mar 2020-21
Commercial sales	***	***	***	***
Internal consumption	***	***	***	***
Total net sales	***	***	***	***
Raw material costs	***	***	***	***
Direct labor costs	***	***	***	***
Other factory costs	***	***	***	***
Cost of goods sold	***	***	***	***

Table continued.

Table VI-2 Continued
NBR: Changes in AUVs between comparison periods

Changes in dollars per pound

Item	2018-20	2018-19	2019-20	Jan-Mar 2020-21
Commercial sales	***	***	***	***
Internal consumption	***	***	***	***
Total net sales	***	***	***	***
Raw material costs	***	***	***	***
Direct labor costs	***	***	***	***
Other factory costs	***	***	***	***
Cost of goods sold	***	***	***	***
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 ***.[1] Its net sales, by both quantity and value, decreased in each successive year between 2018 and 2020, but were higher in the first quarter of 2021 than in the first quarter of 2020. The net sales AUVs for NBR decreased from $*** in 2018 to $*** in 2020, and were $*** and $*** in the first quarters of 2020 and 2021, respectively.[2]

[1] The company reported that the majority of its ***. Email from ***.

[2] The trends in Zeon's total net sales generally reflect the trends in its ***. The company's ***. With the exception of 2018, Zeon's ***. In response to a question from staff regarding the ***. Email from ***.

Cost of goods sold and gross profit or loss

Zeon's raw material costs represented the largest share of the company's cost of goods sold ("COGS") in 2018 and 2019, and the second largest share in 2020, interim 2020, and interim 2021. As a ratio to net sales, and on a per-pound basis, raw materials increased from 2018 to 2019, but decreased in 2020 to levels below those of 2018. Raw material costs decreased *** between interim 2020 and interim 2021. In response to questions from staff, the company reported that it ***. During the first quarter of 2021, the company experienced ***.[3]

Table VI-3 presents Zeon's raw materials, by type. As seen in the table, butadiene and acrylonitrile represent ***. The company reported that its ***.[4]

Table VI-3
NBR: Raw material costs in 2020

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	***	***	***
All raw materials	***	***	***

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

Zeon's direct labor costs, which represented the smallest component of COGS, increased each year from 2018 to 2020, and were higher in interim 2021 than in interim 2020. The company reported that the *** percent increase in its direct labor costs from 2018 to 2019 was attributable to ***

[3] Email from ***; conference transcript, pp. 80-81 (Dalton).
[4] Zeon's U.S. producer questionnaire, section III-9c.

***. The *** percent increase in direct labor from 2019 to 2020 was primarily the result of ***.[5]

The last component of COGS, other factory costs, was the second largest component in 2018 and 2019, and the largest component in 2020 and during the interim periods. The change from the second largest component to the largest was the result of an increase in other factory costs in 2020, coupled with a decrease in raw material costs that year. On an actual basis, other factory costs decreased from 2018 to 2019, increased from 2019 to 2020, and were higher in interim 2021 than in interim 2020. The company reported that the increase in other factory costs was the result of ***.[6] The company's ***.[7] On a per-unit basis, the company's other factory costs increased *** between 2018 and 2020, and were higher in interim 2021 than during the same period in 2020. While the increase in the total value of other factory costs from 2018 to 2020 contributed to the higher per-unit costs, the decrease in the company's net sales volume was a larger factor.[8]

The company's COGS to net sales ratio increased from *** percent in 2018 to *** percent in 2020, while its net sales volume decreased. This resulted in the company's gross profit decreasing from $*** in 2018 to *** in 2020. The company reported an improvement in its gross profit in interim 2021 compared with interim 2020,

[5] Email from ***.

[6] ***. Zeon's U.S. producer questionnaire (original submission), July 14, 2021.

[7] The company does not ***. Email from ***. In order to include the ***. In the U.S. producer questionnaire, companies are instructed to report internal consumption at fair market value ("FMV"). However, the ***.

[8] As seen in table VI-2, the company's other factory costs increased by $*** per pound from 2018 to 2020. Without the inclusion of the company's ***. Zeon's U.S. producer questionnaire (original submission), July 14, 2021.

however this is largely the result of the previously mentioned ***.

SG&A expenses and operating income or loss

As seen in table VI-1, Zeon's SG&A expenses decreased irregularly from 2018 to 2020, and were lower in interim 2021 than in interim 2020. The company's SG&A expenses as a ratio to net sales increased from 2018 to 2020, but were lower in interim 2021 than in interim 2020. The company's operating income from NBR had similar trends as gross profit. It decreased from 2018 to 2020, and improved between the interim periods. The company experienced ***[9]

All other expenses and net income or loss

Classified below operating income are interest expense and other expenses, net of other income. Zeon reported ***.[10] In 2018, 2019, and interim 2020, the net amounts of post-operating income items were negative (i.e., all other income was higher than all other expenses), resulting in an improved net income relative to operating income for those periods. Overall, net income decreased from 2018 to 2020, but was higher in interim 2021 than in interim 2020.[11]

[9] 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.

[10] Email from ***.

[11] A variance analysis is not shown because of the ***.

Capital expenditures and research and development expenses

Table VI-4 presents the Zeon's capital expenditures and research and development ("R&D") expenses. Table VI-5 presents Zeon's narrative explanations of the nature, focus, and significance of its capital expenditures and R&D expenses.

Table VI-4
NBR: U.S. producer's capital expenditures and R&D expenses, by period

Value in 1,000 dollars

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Capital expenditures	***	***	***	***	***
R&D expenses	***	***	***	***	***

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

Table VI-5
NBR: Narrative descriptions of capital expenditures and R&D expenses

Item	Narrative explanation
Capital expenditures	***
R&D expenses	***

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

Assets and return on assets

Table VI-6 presents data on Zeon's total assets and its operating return on assets ("ROA") from its NBR operations.[12] Table VI-7 presents Zeon's narrative response explaining its major asset categories and any significant changes in asset levels over time.

Table VI-6
NBR: U.S. producer's total net assets and operating ROA, by period

Value in 1,000 dollars; ratios in percent

Item	2018	2019	2020
Net assets (1,000 dollars)	***	***	***
Operating ROA (ratio)	***	***	***

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

Table VI-7
NBR: Narrative description of total net assets

Firm	Narrative explanation
Zeon	***

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

[12] The return on assets ("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.

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 the firm's growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-8 presents the categories for which Zeon reported an impact and table VI-9 provides the corresponding narrative responses.

Table VI-8
NBR: Count indicating U.S. producer's actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2018, 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	***
Any negative effects on investment	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	***
Any negative effects on growth and development	Growth	***
Anticipated negative effects of imports	Future	***

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

Table VI-9
NBR: Narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2018

Item	Firm name and accompanying narrative response
***	***
***	***
***	***
***	***

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 the U.S. producer's 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 a foreign producers' or exporters' questionnaire to one firm believed to produce and/or export NBR from France, Arlanxeo Emulsion, and it submitted a usable response.[3] According to an estimate requested of Arlanxeo Emulsion, production of NBR in France reported in its questionnaire accounts for approximately *** percent of overall production of NBR in France.[4] This firm's exports to the United States accounted for approximately *** percent of U.S. imports of NBR from France in 2020. Table VII-1 presents information on the NBR operations of Arlanxeo Emulsion.

Table VII-1
NBR: Summary data for producer Arlanxeo Emulsion in France, 2020

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 Emulsion	***	***	***	***	***	***

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

Changes in operations

Arlanxeo Emulsion reported no operational or organizational changes since January 1, 2018.

[3] This firm was identified through a review of information submitted in the petitions and presented in third-party sources.

[4] While Alranxeo Emulsion estimated that it accounted for *** percent of NBR production in France and *** percent of NBR exports from France to the U.S., the export volumes reported in its questionnaire response accounted for *** percent of NBR imports from France, according to official import statistics for HTS subheading 4002.59.00. *** U.S. importers' questionnaire response, questions I-3, I-4 and II-5a.

Operations on NBR

Table VII-2 presents information on the NBR operations of the responding producer Arlanxeo Emulsion in France.

Arlanxeo Emulsion's NBR production decreased by *** percent during 2018-19 and by *** percent during 2019-20, for a total decrease of *** percent. Production was *** percent higher in interim 2021 than interim 2020 and is projected to increase by *** percent from 2020 to 2021. During 2018-20, a decrease in production and *** capacity resulted in a *** percentage point decrease in capacity utilization. During interim 2021, capacity utilization was *** percentage points higher than in 2020, at *** percent, and is expected to reach *** percent in 2022.

Exports to all other markets than the United States accounted for over *** of total shipments,[5] while exports to the U.S. accounted for between *** and *** percent of total shipments during 2018-20. Home market shipments accounted for less than *** percent throughout the period for which data were collected. During 2018-20, the decrease in exports to the United States was larger than the decrease in exports to all other markets (*** percent versus *** percent). Correspondingly, exports to the United States as a share of total shipments decreased by *** percentage points, while exports to all other markets as a share of total shipments increased by *** percentage points during 2018-20. All three shipment types: exports to the United States, exports to all other markets, and home market shipments were higher in interim 2021 than interim 2020, by ***, ***, and *** percent, respectively. All three shipment types are also projected to increase during 2020-21 and 2021-22. Exports to the United States are expected to increase by *** percent during 2020-2021 and by *** percent during 2021-2022, exports to all other markets are projected to increase by *** percent during 2020-21 and by *** percent during 2021-22, and home market shipments are expected to increase by *** percent during 2020-21 and by *** percent during 2021-22.

End-of-period inventories decreased by *** percent during 2018-20 and are expected to increase by *** percent from 2020-2021. Given that inventories decreased by a greater percentage than total shipments during 2018-20, the ratio of inventories to total shipments decreased from *** percent in 2018 to *** percent in 2020.

The COVID-19 pandemic ***

[5] All other export markets include ***. Arlanxeo Emulsion's foreign producer/exporter questionnaire response, question II-8.

***.

Table VII-2
NBR: Data on industry in France, by item and by period

Quantity in 1,000 pounds

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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 on next page.

Table VII-2 Continued
NBR: Data on industry in France, by item and by period

Shares and ratios in percent

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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	***	***	***	***	***	***	***

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

As shown in table VII-3, Arlanxeo Emulsion produces XNBR, which accounted for less than *** percent of total NBR production in any given period.

Table VII-3
NBR: Production in France, by product type and by period

Quantity in 1,000 pounds; shares in percent

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
XNBR	Quantity	***	***	***	***	***
All other NBR	Quantity	***	***	***	***	***
All NBR	Quantity	***	***	***	***	***
XNBR	Share	***	***	***	***	***
All other NBR	Share	***	***	***	***	***
All NBR	Share	***	***	***	***	***

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

Alternative products

As shown in table VII-4, Arlanxeo Emulsion produced other products with the same equipment, machinery, or workers used to produce NBR, including ***. NBR accounted for the majority of total production using the same equipment/machinery or workers, ranging from *** to *** percent of total production. Production of out-of-scope products decreased by *** percent during 2018-20 and was *** percent lower in interim 2021 than interim 2020. Given *** overall capacity and a *** percent decrease in total production, capacity utilization fell by *** percentage points from *** percent in 2018 to *** percent in 2020, then increased to *** percent during interim 2021.

Table VII-4
NBR: Overall capacity and production on the same equipment as in-scope production by producer Arlanxeo Emulsion in France, by product and by period

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

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Overall capacity	Quantity	***	***	***	***	***
NBR production	Quantity	***	***	***	***	***
Out-of-scope production: Latex NBR	Quantity	***	***	***	***	***
Out-of-scope production: Other	Quantity	***	***	***	***	***
Out-of-scope production: Total	Quantity	***	***	***	***	***
Total production	Quantity	***	***	***	***	***
Overall capacity utilization	Ratio	***	***	***	***	***
NBR production	Share	***	***	***	***	***
Out-of-scope production: Latex NBR	Share	***	***	***	***	***
Out-of-scope production: Other	Share	***	***	***	***	***
Out-of-scope production: Total	Share	***	***	***	***	***
Total production	Share	***	***	***	***	***

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

Exports

According to GTA, the leading export markets for non-latex NBR from France are Germany, the United States, and China (table VII-5). During 2020, Germany was the top export market for non-latex NBR from France, accounting for 22.1 percent by value, followed by the United States, accounting for 18.2 percent.

Table VII-5
Non-latex NBR: Constructed exports from France, by reporting country and by period

Value in 1,000 dollars; share of value in percent

Reporting country	Measure	2018	2019	2020
United States	Value	39,726	38,190	28,229
Germany	Value	50,555	43,116	34,208
China	Value	23,721	18,950	17,616
Italy	Value	12,200	7,714	8,621
Taiwan	Value	8,902	11,387	8,129
Japan	Value	11,789	11,154	6,429
Turkey	Value	8,569	5,810	6,210
United Kingdom	Value	7,793	5,376	5,498
Spain	Value	7,139	5,279	4,690
All other reporting countries	Value	53,570	43,170	35,421
All reporting countries	Value	223,965	190,145	155,051
United States	Share of Value	17.7	20.1	18.2
Germany	Share of Value	22.6	22.7	22.1
China	Share of Value	10.6	10.0	11.4
Italy	Share of Value	5.4	4.1	5.6
Taiwan	Share of Value	4.0	6.0	5.2
Japan	Share of Value	5.3	5.9	4.1
Turkey	Share of Value	3.8	3.1	4.0
United Kingdom	Share of Value	3.5	2.8	3.5
Spain	Share of Value	3.2	2.8	3.0
All other reporting countries	Share of Value	23.9	22.7	22.8
All reporting countries	Share of Value	100.0	100.0	100.0

Source: Official imports statistics under HS subheading 4002.59 as reported by various statistical reporting authorities of those authorities' imports from France (constructed export statistics for France) in the Global Trade Atlas database, accessed July 20, 2021.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.

Note: HS subheading 4002.59 covers in-scope NBR but also contains some out-of-scope product.

The industry in Korea

The Commission issued foreign producers' or exporters' questionnaires to two firms believed to produce and/or export NBR from Korea.[6] A usable response to the Commission's questionnaire was received from one firm: Kumho.[7] Kumho's exports to the United States accounted for approximately *** percent of U.S. imports of NBR from Korea in 2020. According to an estimate requested of Kumho, its production of NBR in Korea reported in its questionnaire response accounts for approximately *** percent of overall production of NBR in Korea. Table VII-6 presents information on the NBR operations of Kumho in Korea.

Table VII-6
NBR: Summary data for producer Kumho in Korea, 2020

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	***	***	***	***	***	***

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

Changes in operations

Kumho reported *** operational or organizational changes since January 1, 2018.

[6] These firms were identified through a review of information submitted in the petitions and presented in third-party sources.

[7] The other firm, ***. Email from ***, July 19, 2021. As shown in table IV-1, *** U.S. importers' questionnaire response, question II-6a. ***. Respondent Kumho's postconference brief, exh. 24.

Operations on NBR

Table VII-7 presents information on the NBR operations of the responding producer Kumho in Korea.

Kumho's NBR production decreased by *** percent during 2018-19, then increased by *** percent during 2019-20, for a total decrease of *** percent during 2018-20. Production was *** percent higher in interim 2021 than interim 2020 and is projected to increase by *** percent from 2021-2022. Kumho does not produce XNBR.[8]

Capacity *** during the data collection period and is ***. Capacity utilization ranged from *** to *** percent during 2018-20 and is projected to reach *** percent in 2022.

Export shipments accounted for the majority of Kumho's total NBR shipments, ranging from *** to *** percent of total shipments.[9] Home market shipments and export shipments to the United States decreased by *** and *** percent, respectively, during 2018-20,[10] while export shipments to all other markets increased by *** percent. Correspondingly, the share of home market shipments to total shipments and the share of U.S. export shipments to total shipments decreased by *** and *** percentage points, respectively, while the share of export shipments to all other markets increased by *** percentage points. Home market shipments, U.S. export shipments, and exports to all other markets, are each projected to increase from 2021 to 2022, by ***, ***, and *** percent, respectively.

The ratio of inventories to total shipments ranged from *** to *** percent during the data collection period. End-of-period inventories increased by *** percent during 2018-20, and were *** percent higher in interim 2021 than interim 2020.

The COVID-19 pandemic ***.[11]

[8] Conference transcript, p. 123 (Kendler).

[9] Kumho's export markets include ***. Kumho's foreign producer/exporter questionnaire response, question II-8.

[10] U.S. export shipments decreased by *** percent from 2019 to 2020. According to Kumho, *** Kumho's foreign producer/exporter questionnaire response, question II-2b.

[11] Kumho's foreign producer/exporter questionnaire response, question II-2b.

Table VII-7
NBR: Data on industry in Korea, by item and by period

Quantity in 1,000 pounds

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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 on next page.

Table VII-7 Continued
NBR: Data on industry in Korea, by item and by period

Shares and ratios in percent

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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	***	***	***	***	***	***	***

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 ***.[12]

[12] Kumho's foreign producer/exporter questionnaire response, question II-4(b).

Exports

According to GTA, the leading export markets for non-latex NBR from Korea are China and India (table VII-8). During 2020, the top export markets for non-latex NBR from Korea in 2020 were China, accounting for 35.0 percent; India, accounting for 11.2 percent; Vietnam, accounting for 7.4 percent; and the United States, accounting for 6.7 percent, by quantity.

Table VII-8
Non-latex NBR: Quantity and value of exports from Korea, by destination market and by period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2018	2019	2020
United States	Quantity	34,570	29,128	19,246
China	Quantity	73,750	74,199	101,278
India	Quantity	42,267	38,405	32,319
Vietnam	Quantity	17,624	20,545	21,365
Italy	Quantity	13,185	13,693	14,955
Germany	Quantity	14,325	12,642	11,790
Turkey	Quantity	12,792	9,536	9,743
Indonesia	Quantity	10,318	10,170	9,017
Thailand	Quantity	9,467	8,588	8,207
All other destination markets	Quantity	66,958	60,738	61,187
All destination markets	Quantity	295,256	277,642	289,106
United States	Value	38,136	25,914	13,106
China	Value	80,318	61,110	65,674
India	Value	46,025	31,521	22,522
Vietnam	Value	20,107	18,613	15,807
Italy	Value	13,397	10,764	9,522
Germany	Value	15,296	10,708	7,896
Turkey	Value	12,758	7,868	6,649
Indonesia	Value	12,310	9,787	7,688
Thailand	Value	10,702	7,340	5,817
All other destination markets	Value	71,494	50,518	41,850
All destination markets	Value	320,544	234,142	196,531

Table continued on next page.

Table VII-8 Continued
NBR: Unit value and share of quantity of exports from Korea, by destination market and by period

Unit value in dollars per pound; share of quantity is the share of total exports by quantity in percent

Destination market	Measure	2018	2019	2020
United States	Unit value	1.10	0.89	0.68
China	Unit value	1.09	0.82	0.65
India	Unit value	1.09	0.82	0.70
Vietnam	Unit value	1.14	0.91	0.74
Italy	Unit value	1.02	0.79	0.64
Germany	Unit value	1.07	0.85	0.67
Turkey	Unit value	1.00	0.83	0.68
Indonesia	Unit value	1.19	0.96	0.85
Thailand	Unit value	1.13	0.85	0.71
All other destination markets	Unit value	1.07	0.83	0.68
All destination markets	Unit value	1.09	0.84	0.68
United States	Share of quantity	11.7	10.5	6.7
China	Share of quantity	25.0	26.7	35.0
India	Share of quantity	14.3	13.8	11.2
Vietnam	Share of quantity	6.0	7.4	7.4
Italy	Share of quantity	4.5	4.9	5.2
Germany	Share of quantity	4.9	4.6	4.1
Turkey	Share of quantity	4.3	3.4	3.4
Indonesia	Share of quantity	3.5	3.7	3.1
Thailand	Share of quantity	3.2	3.1	2.8
All other destination markets	Share of quantity	22.7	21.9	21.2
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 4002.59 as reported by Korea Trade Statistics Promotion Institute (KTSPI) in the Global Trade Atlas database, accessed July 20, 2021.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.

Note: HS subheading 4002.59 covers in-scope NBR but also contains some out-of-scope product.

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.[13] A usable response to the Commission's questionnaire was received from this firm, Industrias Negromex. This firm's exports to the United States accounted for approximately *** percent of U.S. imports of NBR from Mexico in 2020.[14] According to an estimate requested of Industrias Negromex, the production of NBR in Mexico reported in its questionnaire accounts for *** percent of NBR production in Mexico. Table VII-9 presents information on the NBR operations of Industrias Negromex in Mexico.

Table VII-9
NBR: Summary data for producer Industrias Negromex in Mexico, 2020

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)
Industrias Negromex	***	***	***	***	***	***

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

Changes in operations

Industrias Negromex reported *** operational or organizational changes since January 1, 2018.

[13] This firm was identified through a review of information submitted in the petitions and presented in third-party sources.

[14] While Industrias Negromex reports that it is the only NBR producer in Mexico and ***. Respondent Negromex's postconference brief, exh. 1, question 8; Industrias Negromex's foreign producer/exporter questionnaire response, question II-6b.

Operations on NBR

Table VII-10 presents information on the NBR operations of Industrias Negromex in Mexico.

Industria Negromex's NBR production decreased by *** percent during 2018-20 and was *** percent lower in interim 2021 than interim 2020. Production is projected to increase by *** percent during 2020-21. Industrias Negromex does not produce XNBR.[15]

During 2018-20, a decrease in production and *** capacity[16] resulted in a *** percentage point decrease in capacity utilization from *** percent to *** percent. By 2022, capacity utilization is expected to increase to *** percent.

Export shipments accounted for the majority of Industria Negromex's total NBR shipments (between *** and *** percent during the data collection period). Roughly *** of export shipments went to the United States and *** went to all other markets.[17] Exports to the United States, exports to all other markets, and home market shipments all decreased during 2018-20, by ***, ***, and *** percent respectively.[18] All three shipment types are projected to increase from 2020 to 2021, by ***, ***, and *** percent, respectively.[19] U.S. exports' share of total shipments increased from *** percent in 2018 to *** percent in 2019, then returned to *** percent in 2020.

End-of-period inventories decreased during 2018-20, by *** percent. The ratio of inventories to total shipments ranged from *** to *** percent during the data collection period.

[15] Conference transcript, p. 128 (Quintero).

[16] Industrias Negromex reported a ***. Email from ***, July 21, 2021. ***.

[17] All other export markets include ***. Industrias Negromex's foreign producer/exporter questionnaire response, question II-8.

[18] ***. Industrias Negromex's foreign producer/exporter questionnaire response, question II-2b.

[19] The estimated growth for 2021 is based on ***. Industrias Negromex's foreign producer/exporter questionnaire response, question II-8.

Table VII-10
NBR: Data on industry in Mexico, by item and by period

Quantity in 1,000 pounds

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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 on next page.

Table VII-10 Continued
NBR: Data on industry in Mexico, by item and by period

Shares and ratios in percent

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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	***	***	***	***	***	***	***

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

Alternative products

As shown in table VII-11, Industrias Negromex produced other products on the same equipment/machinery, or using the same workers, used to produce NBR, including ***. In-scope NBR accounted for the majority of total production using the same machinery /equipment or workers, ranging from *** to *** percent. Like NBR production, out-of-scope production decreased during 2018-20, by *** percent, but was *** percent higher in interim 2021 than interim 2020. Given the decrease in total production and *** overall capacity, total capacity utilization fell by *** percentage points during 2018-20.

Table VII-11
NBR: Overall capacity and production on the same equipment as in-scope production by producer Industrias Negromex in Mexico, by product and by period

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

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
Overall capacity	Quantity	***	***	***	***	***
NBR production	Quantity	***	***	***	***	***
Out-of-scope production: Latex NBR	Quantity	***	***	***	***	***
Out-of-scope production: Other	Quantity	***	***	***	***	***
Out-of-scope production: Total	Quantity	***	***	***	***	***
Total production	Quantity	***	***	***	***	***
Overall capacity utilization	Ratio	***	***	***	***	***
NBR production	Share	***	***	***	***	***
Out-of-scope production: Latex NBR	Share	***	***	***	***	***
Out-of-scope production: Other	Share	***	***	***	***	***
Out-of-scope production: Total	Share	***	***	***	***	***
Total production	Share	***	***	***	***	***

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

Exports

According to GTA, the leading export markets for non-latex NBR from Mexico are the United States, Spain, and Turkey (table IV-12). During 2020, the United States was the top export market for non-latex NBR from Mexico, accounting for 51.6 percent, followed by Spain, accounting for 16.1 percent.

Table VII-12
Non-latex NBR: Quantity and value of constructed exports from Mexico, by destination market and by period

Quantity in 1,000 pounds; value in 1,000 dollars

Reporting country	Measure	2018	2019	2020
United States	Quantity	18,539	17,651	14,312
Spain	Quantity	6,340	5,058	4,471
Turkey	Quantity	3,414	3,003	4,170
Brazil	Quantity	985	986	1,328
Germany	Quantity	1,297	1,277	1,086
China	Quantity	2,461	834	781
India	Quantity	1,003	553	356
Korea	Quantity	282	268	259
Netherlands	Quantity	50	---	198
All other destination markets	Quantity	3,109	2,040	778
All destination markets	Quantity	37,480	31,670	27,739
United States	Value	20,915	16,675	10,893
Spain	Value	5,931	4,538	2,965
Turkey	Value	3,439	2,675	2,987
Brazil	Value	1,177	1,009	983
Germany	Value	1,455	1,206	845
China	Value	2,422	743	581
India	Value	1,026	481	199
Korea	Value	373	321	299
Netherlands	Value	50	---	143
All other destination markets	Value	3,964	2,366	969
All destination markets	Value	40,752	30,014	20,862

Table continued on next page.

Table VII-12 Continued
NBR: Unit value and share of quantity of constructed exports from Mexico, by destination market and by period

Unit value in dollars per pound; share of quantity is the share of total exports by quantity in percent

Reporting country	Measure	2018	2019	2020
United States	Unit value	1.13	0.94	0.76
Spain	Unit value	0.94	0.90	0.66
Turkey	Unit value	1.01	0.89	0.72
Brazil	Unit value	1.19	1.02	0.74
Germany	Unit value	1.12	0.94	0.78
China	Unit value	0.98	0.89	0.74
India	Unit value	1.02	0.87	0.56
Korea	Unit value	1.32	1.20	1.15
Netherlands	Unit value	1.00	---	0.72
All other destination markets	Unit value	1.28	1.16	1.24
All destination markets	Unit value	1.09	0.95	0.75
United States	Share of quantity	49.5	55.7	51.6
Spain	Share of quantity	16.9	16.0	16.1
Turkey	Share of quantity	9.1	9.5	15.0
Brazil	Share of quantity	2.6	3.1	4.8
Germany	Share of quantity	3.5	4.0	3.9
China	Share of quantity	6.6	2.6	2.8
India	Share of quantity	2.7	1.7	1.3
Korea	Share of quantity	0.8	0.8	0.9
Netherlands	Share of quantity	0.1	---	0.7
All other destination markets	Share of quantity	8.3	6.4	2.8
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official imports statistics under HS subheading 4002.59 as reported by various statistical reporting authorities of those authorities' imports from Mexico (constructed export statistics for Mexico) in the Global Trade Atlas database, accessed July 20, 2021.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.
Note: HS subheading 4002.59 covers in-scope NBR but also contains some out-of-scope product.

Subject countries combined

Table VII-13 presents summary data on NBR operations of the reporting subject producers in the subject countries.

Table VII-13
NBR: Data on the industry in subject countries, by item and by period

Quantity in 1,000 pounds

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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 on next page.

Table VII-13 Continued
NBR: Data on the industry in subject countries, by item and by period

Shares and ratios in percent

Item	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021	Projection 2021	Projection 2022
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	***	***	***	***	***	***	***

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

Table VII-14 presents summary data on production of XNBR and all other NBR of the reporting subject producers in the subject countries.

Table VII-14
NBR: Production in subject countries, by product type and by period

Quantity in 1,000 pounds, Shares in percent

Item	Measure	2018	2019	2020	Jan-Mar 2020	Jan-Mar 2021
XNBR	Quantity	***	***	***	***	***
All other NBR	Quantity	***	***	***	***	***
All NBR	Quantity	***	***	***	***	***
XNBR	Share	***	***	***	***	***
All other NBR	Share	***	***	***	***	***
All NBR	Share	***	***	***	***	***

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

U.S. inventories of imported merchandise

Table VII-15 presents data on U.S. importers' reported inventories of NBR. Inventories of imports from subject sources increased by *** percent from 2018-19, then decreased by *** percent from 2019-20, for an overall *** percent increase during 2018-20. Inventories of imports from subject sources were *** percent higher in interim 2021 than interim 2020.[20] Inventories of imports from nonsubject sources increased by *** percent during 2018-20 but were *** percent lower in interim 2021 than interim 2020.[21]

The ratio of inventories of imports from subject sources to U.S. shipments ranged from *** to *** percent during 2018-20, while the ratio of inventories from nonsubject sources to U.S. shipments ranged from *** (in 2018) to *** percent (in 2020). While end-of-period inventories of imports from nonsubject sources were *** percent lower in interim 2021 than in interim 2020, total import quantities were *** percent lower, thus, the ratio of nonsubject inventories to imports was *** percentage points higher in interim 2021 than in interim 2020.

[20] Most of this increase during interim 2021 was from *** increase in end-of-period inventories of imports from ***. ***. Email from ***, August 5, 2021.

[21] Most of this increase during 2018-20 was from *** increase in end-of-period inventories of imports from nonsubject sources.

Table VII-15
NBR: U.S. importers' inventories, by source and by period

Quantity in 1,000 pounds; ratios in percent

Measure	Source	2018	2019	2020	Jan-Mar 2020	Jan-Mar 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	Korea	***	***	***	***	***
Ratio to imports	Korea	***	***	***	***	***
Ratio to U.S. shipments of imports	Korea	***	***	***	***	***
Ratio to total shipments of imports	Korea	***	***	***	***	***
Inventories quantity	Mexico	***	***	***	***	***
Ratio to imports	Mexico	***	***	***	***	***
Ratio to U.S. shipments of imports	Mexico	***	***	***	***	***
Ratio to total shipments of imports	Mexico	***	***	***	***	***
Inventories quantity	Subject	***	***	***	***	***
Ratio to imports	Subject	***	***	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***	***	***
Ratio to total shipments of imports	Subject	***	***	***	***	***
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 importers to indicate whether they imported or arranged for the importation of NBR after March 31, 2021. Their reported data is presented in table VII-16.

Table VII-16
NBR: Quantity of U.S. importers' arranged imports, by source and by period

Quantity in 1,000 pounds

Source of arranged imports	Apr-Jun 2021	Jul-Sep 2021	Oct-Dec 2021	Jan-Mar 2022	Total
France	***	***	***	***	***
Korea	***	***	***	***	***
Mexico	***	***	***	***	***
Subject sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

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

Third-country trade actions

NBR from France and 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 Korea and France.[22] China applies antidumping duties to imports of NBR from Korea and Japan.[23] India applies antidumping duties to imports of NBR from Korea.[24] On May 12,

[22] On March 2, 2018, preliminary duties on France and 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 Republic of 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 Korea and France. The rate of duty on imports from 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.

[23] 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 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. Zhang,

(*continued*...)

2021, the Government of India published its final findings to impose antidumping duties to imports from the EU, China, Russia, and Japan.[25] Subsequently, on July 20, 2021, the Central

(…*continued*)
Fanny, "China Imposes Anti-dumping Duties on S. Korea, Japan NBR from Nov 9," ICIS, August 11, 2018, https://www.icis.com/explore/resources/news/2018/11/08/10278637/china-imposes-anti-dumping-duties-on-s-korea-japan-nbr-from-9-nov/; 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.

[24] On March 15, 1996, the Government of India initiated an investigation of NBR from Germany and Korea. After a long historical imposition of duties on Korea, the government of India voted on November 24, 2020 in its sunset investigation to continue AD duties on 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.

[25] On May 26, 2020, the government of India initiated an anti-dumping 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.

Government of India decided not to impose anti-dumping duties on NBR from China, the EU, Japan, and Russia.[26] Respondent Negromex of Mexico is not aware of any orders imposed by third countries on its exports.[27]

Information on nonsubject countries

Global capacity of solid NBR was estimated at *** metric tons in 2019, while production was at *** metric tons.[28] Global production in 2018 was *** metric tons.[29] The capacities of each of the global producers are listed in table VII-17. Global production by region is depicted in table VII-18. Global consumption by region is depicted in table VII-19. Global consumption by region and end use category is shown in table VII-20. In 2018, China had the largest production volume of *** metric tons followed by Korea with *** metric tons, Japan with *** metric tons, Western Europe with *** metric tons, and Central and Eastern Europe with *** metric tons.[30] Global consumption by end use was the highest in the automotive category at *** metric tons in 2018, followed by technical rubber goods at *** metric tons, and all other uses at *** metric tons.[31]

Non-latex NBR global exports are shown in table VII-21. The largest global exporter by value in 2020 was Korea with a 22.1 percent share by value ($196.5 million), followed by France with a 17.4 percent share by value ($155.1 million), Japan with a 13.2 percent share by value ($117.6 million), and Belgium with a 9.3 percent share by value ($82.9 million).

[26] The Central Government of India decided not to impose anti-dumping 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).

[27] Respondent Negromex's postconference brief, p. 23.

[28] Production is predicted. IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, November 15, 2019, pp. 7, 11.

[29] IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, November 15, 2019, p. 10.

[30] IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, November 15, 2019, p. 10.

[31] IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, November 15, 2019, p. 13.

Table VII-17
NBR: Annual capacities, estimated in September 2019, by producer and by country or region
September 2019

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, November 15, 2019, p. 7.
Note: Joint ventures have been split accordingly. World: other represents producers in India, Mexico, and Taiwan.

Table VII-18
NBR: Global production quantity, 2018 (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	***
India	***
Japan	***
Malaysia	***
Korea	***
Taiwan	***
Thailand	***
Other	***
Total Asia	***
Global total	***

Source: IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, November 15, 2019, p. 10.
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-19
NBR: Global consumption quantity, 2018 (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	***
India	***
Japan	***
Malaysia	***
Korea	***
Taiwan	***
Thailand	***
Other	***
Total Asia	***
Global total	***

Source: IHS Markit, Chemical Economics Handbook, Nitrile Elastomers, November 15, 2019, p. 12.
Note: These numbers may vary by up to +/- 10 percent due to the nature of wet basis to dry basis status.
Europe, the Middle East and Africa.

Table VII-20
NBR: Global consumption quantity of NBR solid by major region and end use category, 2018 and 2024 (predicted)

Quantity in 1,000 metric tons; annual average growth rate in percent

Country / region	End use category	2018	2024 (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, November 15, 2019, p. 13.

Table VII-21
Non-latex NBR: Global exports, by source and by period

Value in 1,000 dollars; shares in percent

Exporting country	Measure	2018	2019	2020
United States	Value	135,089	133,235	108,906
France	Value	223,965	190,145	155,051
Korea	Value	320,544	234,142	196,531
Mexico	Value	40,752	30,014	20,862
Subject sources total	Value	585,260	454,302	372,444
Japan	Value	153,190	130,445	117,594
Belgium	Value	86,879	81,135	82,917
Germany	Value	61,599	55,679	46,634
Russia	Value	69,703	57,829	43,355
Netherlands	Value	44,292	32,107	36,926
China	Value	37,186	33,615	28,161
Taiwan	Value	22,168	17,878	16,168
Poland	Value	23,656	17,659	13,154
All other exporters	Value	39,020	34,574	24,597
All reporting exporters	Value	1,258,042	1,048,456	890,856
United States	Share of value	10.7	12.7	12.2
France	Share of value	17.8	18.1	17.4
Korea	Share of value	25.5	22.3	22.1
Mexico	Share of value	3.2	2.9	2.3
Subject sources	Share of value	46.5	43.3	41.8
Japan	Share of value	12.2	12.4	13.2
Belgium	Share of value	6.9	7.7	9.3
Germany	Share of value	4.9	5.3	5.2
Russia	Share of value	5.5	5.5	4.9
Netherlands	Share of value	3.5	3.1	4.1
China	Share of value	3.0	3.2	3.2
Taiwan	Share of value	1.8	1.7	1.8
Poland	Share of value	1.9	1.7	1.5
All other exporters	Share of value	3.1	3.3	2.8
All reporting exporters	Share of value	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 4002.59 reported by various national statistical authorities in the Global Trade Atlas database, accessed July 20, 2021 and official global imports statistics from France and Mexico under HS subheading 4002.59 as reported by UN Comtrade in the Global Trade Atlas database, accessed July 20, 2021.
Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.
United States is shown at the top, followed by the countries under investigation, then all remaining top exporting countries in descending order of 2020 data.
Note: HS subheading 4002.59 covers in-scope NBR but also contains some out-of-scope product.

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

APPENDIX B

LIST OF STAFF CONFERENCE WITNESSES

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared in the United States International Trade Commission's preliminary conference via videoconference:

Subject: Acrylonitrile-Butadiene Rubber from France, Korea, and Mexico

Inv. Nos.: 731-TA-1567-1569 (Preliminary)

Date and Time: July 21, 2021 - 9:30 a.m.

OPENING REMARKS:

In Support of Imposition (**Matthew McGrath**, Barnes Richardson & Colburn LLP)
In Opposition to Imposition (**William C. Sjoberg**, Clark Hill PLC)

In Support of the Imposition of Antidumping Duty Orders:

Barnes Richardson & Colburn LLP
Washington, DC
on behalf of

Zeon Chemicals L.P.
Zeon GP, LLC
(collectively, "Zeon")

Michael Recchio, President and Chief Executive Officer, Zeon

Eric Saunders, Vice President, Research and Development, Zeon

Brian Cail, Vice President, Sales and Marketing, Zeon

LaStacia Dalton, Chief Financial Officer, Zeon

Matthew McGrath)
) – OF COUNSEL
Mert Arkan)

In Opposition to the Imposition of
Antidumping Duty Orders:

White & Case LLP
Washington, DC
on behalf of

Kumho Petrochemical Co., Ltd.

David E. Bond)
William J. Moran)
) – OF COUNSEL
Ron Kendler)
C. Alex Dilley)

Clark Hill PLC
Washington, DC
on behalf of

Dynasol, LLC

Daniela Quintero, Global Commercial Intelligence Manager, Dynasol, LLC

Jose Plaza, Commercial Manager America, Dynasol, LLC

Martin Antonio, Counsel, Industrias Negromex, S.A. de C.V.

William C. Sjoberg)
) – OF COUNSEL
Maram T. Salaheldin)

REBUTTAL/CLOSING REMARKS:

In Support of Imposition
(**Matthew McGrath** and **Mert Arkan**, Barnes Richardson & Colburn LLP)
In Opposition to Imposition (**Ron Kendler**, White & Case LLP)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
NBR: Summary data concerning the U.S. market, 2018-20, January to March 2020, and January to March 2021
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			Jan-Mar		Comparision years			Jan-Mar
	2018	2019	2020	2020	2021	2018-20	2018-19	2019-20	2020-21
U.S. consumption quantity:									
Amount	***	***	***	***	***	▼***	▼***	▼***	▼***
Producers' share (fn1)	***	***	***	***	***	▲***	▼***	▲***	▲***
Importers' share (fn1):									
France	***	***	***	***	***	▲***	▲***	▲***	▲***
Korea	***	***	***	***	***	▼***	▼***	▼***	▲***
Mexico	***	***	***	***	***	▲***	▲***	▲***	▼***
Subject sources	***	***	***	***	***	▲***	▲***	▲***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▲***	▼***	▼***
All import sources	***	***	***	***	***	▼***	▲***	▼***	▼***
U.S. consumption value:									
Amount	***	***	***	***	***	▼***	▼***	▼***	▼***
Producers' share (fn1)	***	***	***	***	***	▲***	▼***	▲***	▼***
Importers' share (fn1):									
France	***	***	***	***	***	▲***	▲***	▲***	▲***
Korea	***	***	***	***	***	▼***	▼***	▼***	▲***
Mexico	***	***	***	***	***	▼***	▼***	▲***	▼***
Subject sources	***	***	***	***	***	▼***	▼***	▲***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▲***	▼***	▼***
All import sources	***	***	***	***	***	▼***	▲***	▼***	▲***
U.S. imports from:									
France:									
Quantity	30,883	30,202	25,182	7,735	9,036	▼(18.5)	▼(2.2)	▼(16.6)	▲16.8
Value	41,541	40,259	30,158	10,085	11,330	▼(27.4)	▼(3.1)	▼(25.1)	▲12.3
Unit value	$1.35	$1.33	$1.20	$1.30	$1.25	▼(11.0)	▼(0.9)	▼(10.2)	▼(3.8)
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***
Korea:									
Quantity	33,224	30,120	19,323	5,335	8,061	▼(41.8)	▼(9.3)	▼(35.8)	▲51.1
Value	38,765	29,788	15,076	4,575	7,576	▼(61.1)	▼(23.2)	▼(49.4)	▲65.6
Unit value	$1.17	$0.99	$0.78	$0.86	$0.94	▼(33.1)	▼(15.2)	▼(21.1)	▲9.6
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Mexico:									
Quantity	18,539	17,651	14,312	4,549	3,585	▼(22.8)	▼(4.8)	▼(18.9)	▼(21.2)
Value	21,289	17,029	11,180	4,085	3,634	▼(47.5)	▼(20.0)	▼(34.4)	▼(11.0)
Unit value	$1.15	$0.96	$0.78	$0.90	$1.01	▼(32.0)	▼(16.0)	▼(19.0)	▲12.9
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Subject sources:									
Quantity	82,646	77,973	58,817	17,619	20,683	▼(28.8)	▼(5.7)	▼(24.6)	▲17.4
Value	101,594	87,076	56,413	18,745	22,539	▼(44.5)	▼(14.3)	▼(35.2)	▲20.2
Unit value	$1.23	$1.12	$0.96	$1.06	$1.09	▼(22.0)	▼(9.2)	▼(14.1)	▲2.4
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Nonsubject sources:									
Quantity	40,520	38,034	26,716	6,786	3,232	▼(34.1)	▼(6.1)	▼(29.8)	▼(52.4)
Value	55,869	55,718	30,424	8,533	4,903	▼(45.5)	▼(0.3)	▼(45.4)	▼(42.5)
Unit value	$1.38	$1.46	$1.14	$1.26	$1.52	▼(17.4)	▲6.2	▼(22.3)	▲20.6
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
All import sources:									
Quantity	123,166	116,006	85,534	24,405	23,914	▼(30.6)	▼(5.8)	▼(26.3)	▼(2.0)
Value	157,464	142,794	86,837	27,278	27,442	▼(44.9)	▼(9.3)	▼(39.2)	▲0.6
Unit value	$1.28	$1.23	$1.02	$1.12	$1.15	▼(20.6)	▼(3.7)	▼(17.5)	▲2.7
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***

Table continued on next page.

Table C-1 continued
NBR: Summary data concerning the U.S. market, 2018-20, January to March 2020, and January to March 2021
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			Jan-Mar		Comparision years			Jan-Mar
	2018	2019	2020	2020	2021	2018-20	2018-19	2019-20	2020-21
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	***	***	***	***	***	▲***	▲***	▲***	▼***
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 "(0.05)" percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as "---". Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

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 official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 4002.59.0000, accessed July 18, 2021, adjusted to remove out of scope imports as reported in Commission questionnaires. Imports are based on the imports for consumption data series. Value data are based on landed duty paid value.

APPENDIX D

NBR COMPARISONS TO HNBR AND XNBR

Table D-1
NBR: Count of U.S. producer and importers reporting on the comparability of NBR and HNBR by the like product factors

Number of firms reporting

Comparison factor	Firm type	Always	Frequently	Sometimes	Never
Physical characteristics	U.S. producer	***	***	***	***
Interchangeability	U.S. producer	***	***	***	***
Channels	U.S. producer	***	***	***	***
Manufacturing	U.S. producer	***	***	***	***
Perceptions	U.S. producer	***	***	***	***
Price	U.S. producer	***	***	***	***
Physical characteristics	Importers	0	0	2	5
Interchangeability	Importers	0	0	2	5
Channels	Importers	2	1	1	1
Manufacturing	Importers	1	1	0	2
Perceptions	Importers	0	0	2	4
Price	Importers	0	0	0	6

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

Table D-2
NBR: U.S. producer's narratives on the comparability of HNBR and NBR by the like product factors

Firm	Comparison factor	Narrative explanation
***	Physical characteristics	***
***	Interchangeability	***

Firm	Comparison factor	Narrative explanation
***	Channels	***
***	Manufacturing	***
***	Perceptions	***
***	Price	***

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

Table D-3
NBR: U.S. importers' narratives on the comparability of HNBR and NBR by the like product factors

Firm	Comparison factor	Narrative explanation
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***

Firm	Comparison factor	Narrative explanation
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***

Firm	Comparison factor	Narrative explanation
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***

Firm	Comparison factor	Narrative explanation
***	Price	***
***	Price	***
***	Price	***
***	Price	***
***	Price	***
***	Price	***
***	Price	***
***	Price	***

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

Table D-4
NBR: Count of U.S. producer and importers reporting on the comparability of XNBR and other NBR by the like product factors

Number of firms reporting

Comparison factor	Firm type	Always	Frequently	Sometimes	Never
Physical characteristics	U.S. producer	***	***	***	***
Interchangeability	U.S. producer	***	***	***	***
Channels	U.S. producer	***	***	***	***
Manufacturing	U.S. producer	***	***	***	***
Perceptions	U.S. producer	***	***	***	***
Price	U.S. producer	***	***	***	***
Physical characteristics	Importers	0	1	2	2
Interchangeability	Importers	0	1	2	2
Channels	Importers	2	1	1	0
Manufacturing	Importers	2	1	1	0
Perceptions	Importers	0	1	2	2
Price	Importers	0	1	1	3

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

Table D-5
NBR: U.S. producer's narratives on the comparability of XNBR and other NBR by the like product factors

Firm	Comparison factor	Narrative explanation
***	Physical characteristics	***
***	Interchangeability	***
***	Channels	***
***	Manufacturing	***
***	Perceptions	***
***	Price	***

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

Table D-6
NBR: U.S. importers' narratives on the comparability of XNBR and other NBR by the like product factors

Firm	Comparison factor	Narrative explanation
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Physical characteristics	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***
***	Interchangeability	***

Firm	Comparison factor	Narrative explanation
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Channels	***
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Manufacturing	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***
***	Perceptions	***

Firm	Comparison factor	Narrative explanation
***	Price	***
***	Price	***
***	Price	***
***	Price	***
***	Price	***
***	Price	***

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

APPENDIX E

U.S. SHIPMENTS BY FORM AND ACRYLONITRILE CONTENT (ACN)

Table E-1
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	United States	Quantity	***	***	***	***
Ground/powder	United States	Quantity	***	***	***	***
Liquid (gross weight)	United States	Quantity	***	***	***	***
All forms	United States	Quantity	***	***	***	***
Bale/slab	United States	Value	***	***	***	***
Ground/powder	United States	Value	***	***	***	***
Liquid (gross weight)	United States	Value	***	***	***	***
All forms	United States	Value	***	***	***	***
Bale/slab	United States	Unit value	***	***	***	***
Ground/powder	United States	Unit value	***	***	***	***
Liquid (gross weight)	United States	Unit value	***	***	***	***
All forms	United States	Unit value	***	***	***	***
Bale/slab	United States	Share down quantity	***	***	***	***
Ground/powder	United States	Share down quantity	***	***	***	***
Liquid (gross weight)	United States	Share down quantity	***	***	***	***
All forms	United States	Share down quantity	***	***	***	***
Bale/slab	United States	Share across quantity	***	***	***	***
Ground/powder	United States	Share across quantity	***	***	***	***
Liquid (gross weight)	United States	Share across quantity	***	***	***	***
All forms	United States	Share across quantity	***	***	***	***
Bale/slab	United States	Share down value	***	***	***	***
Ground/powder	United States	Share down value	***	***	***	***
Liquid (gross weight)	United States	Share down value	***	***	***	***
All forms	United States	Share down value	***	***	***	***
Bale/slab	United States	Share across value	***	***	***	***
Ground/powder	United States	Share across value	***	***	***	***
Liquid (gross weight)	United States	Share across value	***	***	***	***
All forms	United States	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	France	Quantity	***	***	***	***
Ground/powder	France	Quantity	***	***	***	***
Liquid (gross weight)	France	Quantity	***	***	***	***
All forms	France	Quantity	***	***	***	***
Bale/slab	France	Value	***	***	***	***
Ground/powder	France	Value	***	***	***	***
Liquid (gross weight)	France	Value	***	***	***	***
All forms	France	Value	***	***	***	***
Bale/slab	France	Unit value	***	***	***	***
Ground/powder	France	Unit value	***	***	***	***
Liquid (gross weight)	France	Unit value	***	***	***	***
All forms	France	Unit value	***	***	***	***
Bale/slab	France	Share down quantity	***	***	***	***
Ground/powder	France	Share down quantity	***	***	***	***
Liquid (gross weight)	France	Share down quantity	***	***	***	***
All forms	France	Share down quantity	***	***	***	***
Bale/slab	France	Share across quantity	***	***	***	***
Ground/powder	France	Share across quantity	***	***	***	***
Liquid (gross weight)	France	Share across quantity	***	***	***	***
All forms	France	Share across quantity	***	***	***	***
Bale/slab	France	Share down value	***	***	***	***
Ground/powder	France	Share down value	***	***	***	***
Liquid (gross weight)	France	Share down value	***	***	***	***
All forms	France	Share down value	***	***	***	***
Bale/slab	France	Share across value	***	***	***	***
Ground/powder	France	Share across value	***	***	***	***
Liquid (gross weight)	France	Share across value	***	***	***	***
All forms	France	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	Korea	Quantity	***	***	***	***
Ground/powder	Korea	Quantity	***	***	***	***
Liquid (gross weight)	Korea	Quantity	***	***	***	***
All forms	Korea	Quantity	***	***	***	***
Bale/slab	Korea	Value	***	***	***	***
Ground/powder	Korea	Value	***	***	***	***
Liquid (gross weight)	Korea	Value	***	***	***	***
All forms	Korea	Value	***	***	***	***
Bale/slab	Korea	Unit value	***	***	***	***
Ground/powder	Korea	Unit value	***	***	***	***
Liquid (gross weight)	Korea	Unit value	***	***	***	***
All forms	Korea	Unit value	***	***	***	***
Bale/slab	Korea	Share down quantity	***	***	***	***
Ground/powder	Korea	Share down quantity	***	***	***	***
Liquid (gross weight)	Korea	Share down quantity	***	***	***	***
All forms	Korea	Share down quantity	***	***	***	***
Bale/slab	Korea	Share across quantity	***	***	***	***
Ground/powder	Korea	Share across quantity	***	***	***	***
Liquid (gross weight)	Korea	Share across quantity	***	***	***	***
All forms	Korea	Share across quantity	***	***	***	***
Bale/slab	Korea	Share down value	***	***	***	***
Ground/powder	Korea	Share down value	***	***	***	***
Liquid (gross weight)	Korea	Share down value	***	***	***	***
All forms	Korea	Share down value	***	***	***	***
Bale/slab	Korea	Share across value	***	***	***	***
Ground/powder	Korea	Share across value	***	***	***	***
Liquid (gross weight)	Korea	Share across value	***	***	***	***
All forms	Korea	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	Mexico	Quantity	***	***	***	***
Ground/powder	Mexico	Quantity	***	***	***	***
Liquid (gross weight)	Mexico	Quantity	***	***	***	***
All forms	Mexico	Quantity	***	***	***	***
Bale/slab	Mexico	Value	***	***	***	***
Ground/powder	Mexico	Value	***	***	***	***
Liquid (gross weight)	Mexico	Value	***	***	***	***
All forms	Mexico	Value	***	***	***	***
Bale/slab	Mexico	Unit value	***	***	***	***
Ground/powder	Mexico	Unit value	***	***	***	***
Liquid (gross weight)	Mexico	Unit value	***	***	***	***
All forms	Mexico	Unit value	***	***	***	***
Bale/slab	Mexico	Share down quantity	***	***	***	***
Ground/powder	Mexico	Share down quantity	***	***	***	***
Liquid (gross weight)	Mexico	Share down quantity	***	***	***	***
All forms	Mexico	Share down quantity	***	***	***	***
Bale/slab	Mexico	Share across quantity	***	***	***	***
Ground/powder	Mexico	Share across quantity	***	***	***	***
Liquid (gross weight)	Mexico	Share across quantity	***	***	***	***
All forms	Mexico	Share across quantity	***	***	***	***
Bale/slab	Mexico	Share down value	***	***	***	***
Ground/powder	Mexico	Share down value	***	***	***	***
Liquid (gross weight)	Mexico	Share down value	***	***	***	***
All forms	Mexico	Share down value	***	***	***	***
Bale/slab	Mexico	Share across value	***	***	***	***
Ground/powder	Mexico	Share across value	***	***	***	***
Liquid (gross weight)	Mexico	Share across value	***	***	***	***
All forms	Mexico	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	Subject sources	Quantity	***	***	***	***
Ground/powder	Subject sources	Quantity	***	***	***	***
Liquid (gross weight)	Subject sources	Quantity	***	***	***	***
All forms	Subject sources	Quantity	***	***	***	***
Bale/slab	Subject sources	Value	***	***	***	***
Ground/powder	Subject sources	Value	***	***	***	***
Liquid (gross weight)	Subject sources	Value	***	***	***	***
All forms	Subject sources	Value	***	***	***	***
Bale/slab	Subject sources	Unit value	***	***	***	***
Ground/powder	Subject sources	Unit value	***	***	***	***
Liquid (gross weight)	Subject sources	Unit value	***	***	***	***
All forms	Subject sources	Unit value	***	***	***	***
Bale/slab	Subject sources	Share down quantity	***	***	***	***
Ground/powder	Subject sources	Share down quantity	***	***	***	***
Liquid (gross weight)	Subject sources	Share down quantity	***	***	***	***
All forms	Subject sources	Share down quantity	***	***	***	***
Bale/slab	Subject sources	Share across quantity	***	***	***	***
Ground/powder	Subject sources	Share across quantity	***	***	***	***
Liquid (gross weight)	Subject sources	Share across quantity	***	***	***	***
All forms	Subject sources	Share across quantity	***	***	***	***
Bale/slab	Subject sources	Share down value	***	***	***	***
Ground/powder	Subject sources	Share down value	***	***	***	***
Liquid (gross weight)	Subject sources	Share down value	***	***	***	***
All forms	Subject sources	Share down value	***	***	***	***
Bale/slab	Subject sources	Share across value	***	***	***	***
Ground/powder	Subject sources	Share across value	***	***	***	***
Liquid (gross weight)	Subject sources	Share across value	***	***	***	***
All forms	Subject sources	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	Nonsubject	Quantity	***	***	***	***
Ground/powder	Nonsubject	Quantity	***	***	***	***
Liquid (gross weight)	Nonsubject	Quantity	***	***	***	***
All forms	Nonsubject	Quantity	***	***	***	***
Bale/slab	Nonsubject	Value	***	***	***	***
Ground/powder	Nonsubject	Value	***	***	***	***
Liquid (gross weight)	Nonsubject	Value	***	***	***	***
All forms	Nonsubject	Value	***	***	***	***
Bale/slab	Nonsubject	Unit value	***	***	***	***
Ground/powder	Nonsubject	Unit value	***	***	***	***
Liquid (gross weight)	Nonsubject	Unit value	***	***	***	***
All forms	Nonsubject	Unit value	***	***	***	***
Bale/slab	Nonsubject	Share down quantity	***	***	***	***
Ground/powder	Nonsubject	Share down quantity	***	***	***	***
Liquid (gross weight)	Nonsubject	Share down quantity	***	***	***	***
All forms	Nonsubject	Share down quantity	***	***	***	***
Bale/slab	Nonsubject	Share across quantity	***	***	***	***
Ground/powder	Nonsubject	Share across quantity	***	***	***	***
Liquid (gross weight)	Nonsubject	Share across quantity	***	***	***	***
All forms	Nonsubject	Share across quantity	***	***	***	***
Bale/slab	Nonsubject	Share down value	***	***	***	***
Ground/powder	Nonsubject	Share down value	***	***	***	***
Liquid (gross weight)	Nonsubject	Share down value	***	***	***	***
All forms	Nonsubject	Share down value	***	***	***	***
Bale/slab	Nonsubject	Share across value	***	***	***	***
Ground/powder	Nonsubject	Share across value	***	***	***	***
Liquid (gross weight)	Nonsubject	Share across value	***	***	***	***
All forms	Nonsubject	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	All import sources	Quantity	***	***	***	***
Ground/powder	All import sources	Quantity	***	***	***	***
Liquid (gross weight)	All import sources	Quantity	***	***	***	***
All forms	All import sources	Quantity	***	***	***	***
Bale/slab	All import sources	Value	***	***	***	***
Ground/powder	All import sources	Value	***	***	***	***
Liquid (gross weight)	All import sources	Value	***	***	***	***
All forms	All import sources	Value	***	***	***	***
Bale/slab	All import sources	Unit value	***	***	***	***
Ground/powder	All import sources	Unit value	***	***	***	***
Liquid (gross weight)	All import sources	Unit value	***	***	***	***
All forms	All import sources	Unit value	***	***	***	***
Bale/slab	All import sources	Share down quantity	***	***	***	***
Ground/powder	All import sources	Share down quantity	***	***	***	***
Liquid (gross weight)	All import sources	Share down quantity	***	***	***	***
All forms	All import sources	Share down quantity	***	***	***	***
Bale/slab	All import sources	Share across quantity	***	***	***	***
Ground/powder	All import sources	Share across quantity	***	***	***	***
Liquid (gross weight)	All import sources	Share across quantity	***	***	***	***
All forms	All import sources	Share across quantity	***	***	***	***
Bale/slab	All import sources	Share down value	***	***	***	***
Ground/powder	All import sources	Share down value	***	***	***	***
Liquid (gross weight)	All import sources	Share down value	***	***	***	***
All forms	All import sources	Share down value	***	***	***	***
Bale/slab	All import sources	Share across value	***	***	***	***
Ground/powder	All import sources	Share across value	***	***	***	***
Liquid (gross weight)	All import sources	Share across value	***	***	***	***
All forms	All import sources	Share across value	***	***	***	***

Table continued on next page.

Table E-1 Continued
NBR: U.S. shipments by source, form, and ACN content, 2020

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

Form	Source	Measure	<26% ACN	26% to 41% ACN	>41% ACN	All ACN content
Bale/slab	All sources	Quantity	***	***	***	***
Ground/powder	All sources	Quantity	***	***	***	***
Liquid (gross weight)	All sources	Quantity	***	***	***	***
All forms	All sources	Quantity	***	***	***	***
Bale/slab	All sources	Value	***	***	***	***
Ground/powder	All sources	Value	***	***	***	***
Liquid (gross weight)	All sources	Value	***	***	***	***
All forms	All sources	Value	***	***	***	***
Bale/slab	All sources	Unit value	***	***	***	***
Ground/powder	All sources	Unit value	***	***	***	***
Liquid (gross weight)	All sources	Unit value	***	***	***	***
All forms	All sources	Unit value	***	***	***	***
Bale/slab	All sources	Share down quantity	***	***	***	***
Ground/powder	All sources	Share down quantity	***	***	***	***
Liquid (gross weight)	All sources	Share down quantity	***	***	***	***
All forms	All sources	Share down quantity	***	***	***	***
Bale/slab	All sources	Share across quantity	***	***	***	***
Ground/powder	All sources	Share across quantity	***	***	***	***
Liquid (gross weight)	All sources	Share across quantity	***	***	***	***
All forms	All sources	Share across quantity	***	***	***	***
Bale/slab	All sources	Share down value	***	***	***	***
Ground/powder	All sources	Share down value	***	***	***	***
Liquid (gross weight)	All sources	Share down value	***	***	***	***
All forms	All sources	Share down value	***	***	***	***
Bale/slab	All sources	Share across value	***	***	***	***
Ground/powder	All sources	Share across value	***	***	***	***
Liquid (gross weight)	All sources	Share across value	***	***	***	***
All forms	All sources	Share across value	***	***	***	***

Note: ***.

***.

Note: The ground/powder category also includes particulates and pellets. Liquid is reported in gross weight.

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