Hexamine (Hexamethylenetetramine) from China, Germany, India, and Saudi Arabia

Investigation Nos. 701-TA-737-738 and 731-TA-1712-1715
(Preliminary)

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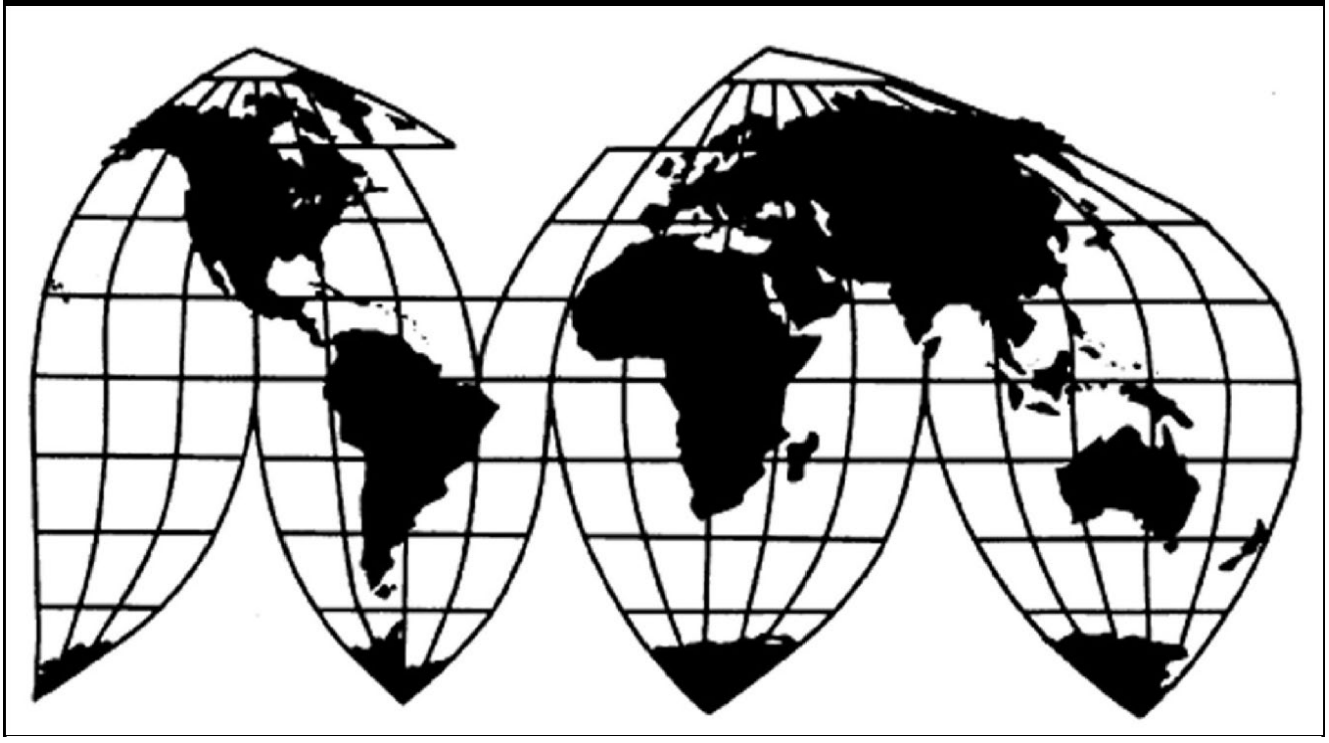
U.S. International Trade Commission



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U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-737-738 and 731-TA-1712-1715 (Preliminary)

Hexamine (Hexamethylenetetramine) from China, Germany, India, and Saudi Arabia

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 hexamine (hexamethylenetetramine) from China, Germany, India, and Saudi Arabia, provided for in subheading 2933.69.50 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") and imports of the subject merchandise from China and India that are alleged to be subsidized by the governments of China and India.[2] [3]

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 § 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 §§ 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under §§ 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not

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

[2] 89 FR 87545 and 87560 (November 4, 2024).

[3] Chair Karpel determines that there is a reasonable indication that an industry in the United States is threatened with material injury by reason of imports of hexamine from China, Germany, India, and Saudi Arabia that are alleged to be sold in the United States at LTFV and imports of the subject merchandise from China and India that are alleged to be subsidized by the governments of China and India.

enter a separate appearance for the final phase of the investigations. Any other party may file an entry of appearance for the final phase of the investigations after publication of the final phase notice of scheduling. 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 and countervailing duty 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. As provided in section 207.20 of the Commission's rules, the Director of the Office of Investigations will circulate draft questionnaires for the final phase of the investigations to parties to the investigations, placing copies on the Commission's Electronic Document Information System (EDIS, https://edis.usitc.gov), for comment.

BACKGROUND

On September 30, 2024, Bakelite Synthetics (Atlanta, Georgia) filed petitions with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of subsidized imports of hexamine from China and India and LTFV imports of hexamine from China, Germany, India, and Saudi Arabia. Accordingly, effective September 30, 2024, the Commission instituted countervailing duty investigation Nos. 701-TA-737-738 and antidumping duty investigation Nos. 731-TA-1712-1715 (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* on October 4, 2024 (89 FR 80929). The Commission conducted its conference on October 21, 2024. 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 hexamethylenetetramine ("hexamine") from China, Germany, India, and Saudi Arabia that are alleged to be sold in the United States at less than fair value ("LTFV") and imports of hexamine from China and India that are allegedly subsidized by the governments of China and India.[1]

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.[2] 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."[3]

II. Background

Bakelite LLC ("Petitioner"), the sole U.S. producer of hexamine, filed the petitions in these investigations on September 30, 2024. Petitioner appeared at the staff conference accompanied by counsel and filed a postconference brief.[4]

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[1] Chair Karpel finds that there is a reasonable indication that an industry in the United States is threatened with materially injured by reason of imports of hexamine from China, Germany, India, and Saudi Arabia that are alleged to be sold in the United States at LTFV and imports of hexamine from China and India that are allegedly subsidized by the governments of China and India. Chair Karpel joins the majority findings, as detailed in this opinion, regarding the definition of the domestic like product and the domestic industry, negligibility and cumulation, conditions of competition, and volume. She also joins the majority's factual findings in the price and impact sections of this opinion except as noted.

[2] 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.

[3] *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).

[4] Petitioner's Confidential Postconference Brief, EDIS Doc. 835594 (Oct. 24, 2024) ("Petitioner's Postconference Brief").

One respondent entity participated in these investigations. Kanoria Chemicals & Industries Limited ("KCIL"), an Indian producer and exporter of subject merchandise, appeared at the staff conference, accompanied by counsel, and submitted a postconference brief.[5]

U.S. industry data are based on the questionnaire response of one domestic producer, accounting for all known U.S. production of hexamine in 2023.[6] U.S. import data are based on the questionnaire responses of ten U.S. importers, estimated to have accounted for *** percent of total subject imports in 2023, including *** percent of subject imports from China, *** percent of subject imports from Germany, *** percent of subject imports from India, and *** percent of subject imports from Saudi Arabia.[7] Responding U.S. importers also accounted for *** percent of nonsubject imports and *** percent of total imports in 2023.[8]

The Commission received two responses to its questionnaires from foreign producers of subject merchandise: one firm in India, estimated to account for *** percent of total subject exports from India to the United States in 2023, and one firm in Saudi Arabia, estimated to account for *** percent of subject exports from Saudi Arabia to the United States in 2023.[9] The Commission did not receive responses from any foreign producers in China or Germany.[10]

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."[11] 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."[12] In turn, the Tariff Act defines

[5] KCIL's Confidential Postconference Brief, EDIS Doc. 835552 (Oct. 24, 2024) ("KCIL's Postconference Brief").

[6] Confidential Staff Report, INV-WW-139 (Nov. 7, 2024) as revised in INV-WW-140 (Nov. 12, 2024) ("CR") and *Hexamine from China, Germany, India, and Saudi Arabia*, Inv. Nos. 701-TA-737-738 and 731-TA-1712-1715 (Preliminary), USITC Pub. 5563 (Nov. 2024) ("PR") at Table III-1.

[7] CR/PR at IV-1

[8] CR/PR at IV-1.

[9] CR/PR at Table VII-1

[10] CR/PR at Table VII-1.

[11] 19 U.S.C. § 1677(4)(A).

[12] 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."[13]

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.[14] 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."[15] The Commission then defines the domestic like product in light of the imported articles Commerce has identified.[16] 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.[17] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[18] The Commission looks for clear dividing lines among possible like products and disregards minor

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[13] 19 U.S.C. § 1677(10).

[14] 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).

[15] *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).

[16] *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).

[17] *See*, *e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Dep't of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington 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).

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

variations.[19] It may, where appropriate, include domestic articles in the domestic like product in addition to those described in the scope.[20]

In its notice of initiation, Commerce defined the imported merchandise within the scope of the investigation as:

> {H}examine in granular form, with a particle size of 5 millimeters or less, whether stabilized or unstabilized, whether or not blended, mixed, pulverized, or grounded with other products, containing 50 percent or more hexamine by weight.
>
> Hexamine is the common name for hexamethylene tetramine (Chemical Abstract Service #100-97-0), and is also referred to as 1,3,5,7-tetraazaadamantanemethenamine; HMT; HMTA; 1,3,5,7-tetraazatricyclo {3.3.1.13,7} decane; 1,3,5,7-tetraaza adamantane; hexamethylenamine. Hexamine has the chemical formula $C_6 H_{12} N_4$.
>
> Granular hexamine that has been blended with other product(s) is included in this scope when the resulting mix contains 50 percent or more of hexamine by weight, regardless of whether it is blended with inert additives, co-reactants, or any additives that undergo self-condensation.
>
> Subject merchandise includes merchandise matching the above description that has been processed in a third country, including by commingling, diluting, adding or removing additives, or performing any other processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the subject country.

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[19] *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.").

[20] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895-96 (Final), USITC Pub. 3467 (Nov. 2001) at 8 n.34; *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).

> Merchandise covered by the scope of the investigations can be classified in the Harmonized Tariff Schedule (HTSUS) of the United States under the subheading 2933.69.5000. The HTSUS subheading and Chemical Abstracts Service registry number are provided for convenience and customs purposes only; however, the written description of the scope is dispositive.[21]

Hexamine is a solid white powder that is highly water soluble and stable at room temperature.[22] Hexamine's properties make it useful as a reactant or catalyst in a variety of applications. In explosives and munitions, hexamine is used to form RDX, a high-detonation explosive with military and civilian applications.[23] In phenolic resins, hexamine is both a curing agent and a catalyst promoting polymerization.[24] In rubber and tire manufacture, hexamine functions as an acceleration and curing agent in vulcanization, improves performance, and gives tires additional abrasion resistance and durability.[25] Hexamine is also used in fuel tablets, biocides, refractory and friction materials, and as a corrosion inhibitor for metal surfaces.[26]

A. Arguments of the Parties

Petitioner argues that the Commission should define a single domestic like product consisting of hexamine coextensive with the scope of the investigations.[27] The sole respondent did not object to Petitioner's proposed definition for purposes of the preliminary determination.

B. Analysis

Based on the record, we define a single domestic like product consisting of hexamine, coextensive with the scope.

Physical Characteristics and Uses. Hexamine takes the form of a solid white powder, used as a reactant or a catalyst in a wide variety of applications, including explosives and

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[21] *Hexamethylenetetramine From the People's Republic of China and India: Initiation of Countervailing Duty Investigations*, 89 Fed. Reg. 87560 (Nov. 4, 2024); *Hexamethylenetetramine From the People's Republic of China, Germany, India, and Saudi Arabia: Initiation of Antidumping Duty Investigations*, 89 Fed. Reg. 87545 (Nov. 4, 2024).

[22] CR/PR at I-9.

[23] CR/PR at I-9.

[24] CR/PR at I-9.

[25] CR/PR at I-9.

[26] CR/PR at I-9 to I-10.

[27] Petitioner's Postconference Brief at 3; Petitions for the Imposition of Antidumping and Countervailing Duties Pursuant to Sections 701 and 731 of the Tariff Act of 1930, As Amended on Behalf of Bakelite LLC: Volume 1 – General Information and Injury, EDIS Doc. 833603 (Sept. 30, 2024) ("Petition") at 13-14.

munitions, phenolic resins, rubber and tires, energy, biocides, refractory and friction materials, polymers, and metal finishing.[28]

Manufacturing Facilities, Production Processes, and Production Workers. Hexamine is produced from a chemical reaction involving ammonia and formaldehyde.[29] After the chemical reaction, hexamine precipitates out of the resulting solution in the form of solid crystals that are then processed through a crystallizer unit.[30] Next, the resulting slurry is transferred to a centrifuge where the hexamine crystals are separated and sent to a dryer unit to remove any residual moisture, after which grinding may be performed if a smaller particle size is required.[31] The domestic industry uses the same equipment, machinery, production processes, and employees to produce granular hexamine.[32]

Interchangeability. Hexamine varies in granule size, the presence of additives, and packaging, but is generally interchangeable.[33]

Customer and Producer Perceptions. Producers and customers perceive hexamine as an intermediate chemical input.[34]

Channels of Distribution. There are four channels of distribution for hexamine: distributors, tire and rubber end users, petrochemical and plastic users, and other end users. U.S. shipments of domestically produced hexamine are sold in each channel of distribution with the *** majority going to other end users and petrochemical and plastic users.[35]

Price. The pricing data indicate that prices for the different variations of domestically produced hexamine generally fell within a similar range during the period of investigation ("POI").[36]

Conclusion. All domestically produced granular hexamine possesses similar physical characteristics, has the same range of end uses, and is produced through the same production processes at the same manufacturing facility using the same employees. Hexamine is perceived to be a single product category by market participants and is sold within the same general range of prices. Based on the preponderance of similarities among all types of hexamine, and

[28] CR/PR at I-9 to I-10.
[29] CR/PR at I-10.
[30] CR/PR at I-11.
[31] CR/PR at I-12.
[32] Petition at 14.
[33] Petition at 13.
[34] Petition at 14.
[35] CR/PR at Table II-2.
[36] CR/PR at Table V-7.

in the absence of any contrary argument, we define a single domestic like product consisting of hexamine, coextensive with the scope, for purposes of our preliminary determinations.

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."[37] 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 the Commission should define the domestic industry as including all U.S. producers of the domestic like product – namely, Petitioner, the only known domestic producer of hexamine.[38] The sole respondent does not dispute this position. There are no related party issues, as Petitioner did not import or purchase subject merchandise during the period of investigation and is not related to an importer or exporter of subject merchandise.[39] Therefore, consistent with our definition of the domestic like product, we define the domestic industry to include all domestic producers of hexamine, *i.e.*, Petitioner.

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 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.[40] The statute further provides that subject imports from a single country which comprise less than 3 percent of total such imports of the product may not be considered negligible if there are several countries subject to investigation with negligible imports and the sum of such imports from all those countries collectively accounts for more than 7 percent of the volume of all such merchandise imported into the United States.[41]

[37] 19 U.S.C. § 1677(4)(A).

[38] CR/PR at Table III-1.

[39] CR/PR at III-2 and III-15.

[40] 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)).

[41] 19 U.S.C. § 1677(24)(A)(ii).

A. Arguments of the Parties

Petitioner's Arguments. Petitioner argues that subject imports from China, Germany, India, and Saudi Arabia are not negligible.[42]

Respondent's Arguments. Respondent does not contest negligibility.[43]

B. Analysis

We first consider what data to use for calculating import shares for purposes of our negligibility analysis. The coverage of the Commission's importer questionnaire data for 2023 was *** percent for all import sources and *** percent for subject imports based on official U.S. imports statistics for HTSUS statistical reporting number 2933.69.5000.[44] The coverage of responding importers in proprietary, Census-edited Customs records as a share of the total volume reported in official import statistics, was *** percent of imports from China, *** percent from Germany, *** percent from India, and *** percent from Saudi Arabia.[45] Given the relatively high coverage afforded by importer questionnaire responses, the questionnaire data appears to provide the best information available on this preliminary phase record for purposes of negligibility calculations; however, as discussed below, we intend to investigate further in any final phase of these investigations the noted discrepancy between reported questionnaire data and official import statistics with respect to subject imports from China.

Based on the questionnaire data, during the 12-month period preceding the filing of the petitions (September 2023 through August 2024), subject imports from Germany accounted for *** percent of total imports, subject imports from India accounted for *** percent of total imports, and subject imports from Saudi Arabia accounted for *** percent of total imports.[46] Consequently, we find that imports of hexamine from Germany, India, and Saudi Arabia subject

[42] Petitioner's Postconference Br. at 3-4. Petitioner relied on the official import statistics for HTS subheading 2933.69.50 for the August 2023 to July 2024 period because that was the most recent twelve-month period available at the time the petition was filed. *Id.* at 4. However, official import statistics are now available for the actual 12-month period preceding the filing of the petition (September 2023 through August 2024). CR/PR at Table IV-5.

[43] KCIL's Postconference Brief at 11.

[44] CR/PR at IV-1.

[45] CR/PR at IV-1.

[46] CR/PR Table IV-4. Subject import volume is the same with respect to imports of hexamine from India subject to antidumping and countervailing duty investigations. Based on official statistics, during the 12-month period preceding the filing of the petitions (September 2023 through August 2024), subject imports from Germany accounted for 23.2 percent of total imports, subject imports from India accounted for 8.1 percent of total imports, and subject imports from Saudi Arabia accounted for 58.0 percent of total imports. CR/PR Table IV-5.

to antidumping duty investigations and subject imports from India subject to the countervailing duty investigation are not negligible.

Based on the questionnaire data, subject imports from China accounted for *** percent of total imports during the 12 months preceding the filing of the petition.[47] However, under the relevant *American Lamb* standard,[48] the record in the preliminary phase of these investigations must provide clear and convincing evidence that subject imports from China will not exceed the negligibility threshold in any final investigations in order to terminate the investigations on hexamine from China. It does not. Based on the official import statistics, subject imports from China accounted for 4.6 percent of total imports during the 12 months preceding the filing of the petition.[49] Given the information available on the current record, we cannot account for the differences between the negligibility calculation for China based on the questionnaire data and the official import statistics.[50] Consequently, in the absence of clear and convincing evidence that subject imports from China will not exceed the negligibility thresholds in any final investigations, we find imports from China subject to the antidumping and countervailing duty investigations are not negligible for purposes of these preliminary phase investigations.

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

[47] CR/PR Table IV-4. Subject import volume is the same with respect to imports of hexamine from China subject to antidumping and countervailing duty investigations.

[48] *American Lamb Co.*, 785 F.2d at 1001; *Co-Steel Raritan, Inc. v. United States*, 357 F.3d 1294 (Fed. Cir. 2004).

[49] CR/PR at Table IV-5. HTS reporting number 2933.69.5000 is believed to contain minimal out-of-scope merchandise. Staff Conference Transcript ("Tr.") at 22 (Kanna).

[50] The Census Bureau used constructed quantities in certain instances in the official statistics for imports of hexamine from China due to what it viewed as aberrational average unit values. CR/PR at IV-3 n.6. The reported quantities in the official import statistics are thus not the actual quantities of hexamine reported by the importers, at least in some cases. *Id*. The Census Bureau reports that ***. Staff Correspondence with Census Bureau, EDIS Doc. 836499 (Nov. 6, 2024). At the same time, the negligibility data in importers' questionnaire responses appear to not account for all imports of hexamine from China during the negligibility period. In particular, official Commerce import statistics under HTS reporting number 2933.69.5000 show imports of hexamine from China during certain months of the negligibility period when responding importers did not report any subject imports from China. *See* CR/PR at Table IV-8 and U.S. Importer Questionnaire responses at II-3b and II-5a. Thus, import volumes of hexamine from China may be overestimated in official statistics and underestimated in questionnaire responses. We intend to examine this issue further in any final investigations.

requires the Commission to cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

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

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

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

(4) whether the subject imports are simultaneously present in the market.[51]

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.[52] Only a "reasonable overlap" of competition is required.[53]

A. Arguments of the Parties

Petitioner's Argument. Petitioner argues that the Commission should cumulate subject imports from all four subject countries. It contends that subject imports from China, India, Germany, and Saudi Arabia and the domestic like product are fungible. Petitioner observes

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

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

[53] 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.").

that hexamine from all subject countries and the domestic like product is an intermediate input in the production of chemicals used in the manufacture of plastics, resins, and rubber and, thus, is universally used in the same applications.[54] It notes that even the sole respondent stated that "there shouldn't be any difference, because hexamine is hexamine."[55] According to Petitioner, the vast majority (85 to 90 percent) of the domestic like product went to end users while the remainder went to distributors.[56] Petitioner claims that subject imports from each country enter in multiple customs districts throughout the United States, are sold in the same geographic markets, and were simultaneously present in the U.S. market.[57]

Respondent's Argument. For purposes of the preliminary phase of these investigations, the sole respondent has not argued for or against cumulation.

B. Analysis

We consider subject imports from China, Germany, India, and Saudi Arabia on a cumulated basis, because the statutory criteria for cumulation are satisfied and the record shows a reasonable overlap in competition. As an initial matter, Petitioner filed the antidumping and countervailing duty petitions with respect to all four countries on the same day, September 30, 2024.[58]

Fungibility. The record indicates that there is a substantial degree of fungibility between and among domestically produced hexamine and imports from each subject country. The sole U.S. producer reported that the domestic like product and subject imports from each source were "always" or "frequently" interchangeable with one another.[59] Half of responding importers reported that the domestic like product was "frequently" interchangeable with subject imports from China, India, and Saudi Arabia, and all responding importers reported that the domestic like product was "always" or "frequently" interchangeable with subject imports from Germany.[60]

Channels of Distribution. The U.S. producer sold the vast majority of its hexamine in the "other" end users channel, with the second highest volume in the petrochemical and plastic users channel, and meaningful amounts in the other channels of distribution. Subject imports

[54] Petitioner's Postconference Brief at 5.
[55] Petitioner's Postconference Brief at 5 (*citing* Tr. at 62 (Ojha)).
[56] Petitioner's Postconference Brief at 6.
[57] Petitioner's Postconference Brief at 17 and Petition Exhibit I-13.
[58] CR/PR Table I-1.
[59] CR/PR at Table II-7.
[60] CR/PR at Table II-8.

from all four subject sources made significant sales in the petrochemical and plastic users channel, especially toward the end of the POI.[61]

Geographic Overlap. The U.S. producer reported selling hexamine to all regions in the contiguous United States.[62] Imports from all four subject countries were sold in the Northeast and Midwest.[63] Official import statistics also indicate that subject imports from the four subject countries entered the United States through ports located in the East and North. [64]

Simultaneous Presence in Market. As reflected by the pricing data, the domestic like product was present in the U.S. market throughout the POI.[65] Monthly HTS import data show that imports from Germany entered in 37 of the 44 months from January 2021 to August 2024, imports from Saudia Arabia entered in 16 of the 44 months, imports from India entered in 14 of the 44 months, and imports from China entered in 12 of the 44 months.[66]

Conclusion. The record of the preliminary phase of these investigations indicates that subject imports from each of the subject countries are generally fungible with the domestic like product and each other. The record also indicates that significant volumes of imports from each of the subject countries and the domestic like product overlapped in the petrochemical and plastic users channel, and that subject imports from multiple subject sources were sold to tire and rubber end users and other end users as well. Imports from each of the subject countries and the domestic like product overlapped in two geographic regions and were simultaneously present in the U.S. market during the POI. As these considerations indicate a reasonable overlap of competition between and among subject imports from China, Germany, India, and Saudi Arabia and the domestic like product, we cumulate subject imports from these sources for our analysis of whether there is a reasonable indication of material injury by reason of subject imports.

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

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

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

[64] CR/PR at Table IV-7. Subject imports did not enter from the Southern border and only subject imports from China entered from the Western border. *Id.*

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

[66] CR/PR at IV-17 and Table IV-8.

VII. Reasonable Indication of Material Injury by Reason of Subject Imports[67]

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 investigation.[68] 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.[69] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[70] 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.[71] 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."[72]

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,[73] 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.[74] 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

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[67] Chair Karpel finds that there is a reasonable indication that the domestic industry is threatened with material injury by reason of subject imports, as discussed in her Separate Views. She joins the majority's findings in sections VII.A-C, and the majority's factual findings in sections VII.D-E except as noted.

[68] 19 U.S.C. §§ 1671b(a), 1673b(a).

[69] 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).

[70] 19 U.S.C. § 1677(7)(A).

[71] 19 U.S.C. § 1677(7)(C)(iii).

[72] 19 U.S.C. § 1677(7)(C)(iii).

[73] 19 U.S.C. §§ 1671b(a), 1673b(a).

[74] *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).

reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[75]

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.[76] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[77] Nor does

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[75] 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).

[76] 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.

[77] 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.
(Continued…)

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.[78] It is clear that the existence of injury caused by other factors does not compel a negative determination.[79]

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."[80] 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 sources to the subject imports."[81] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[82]

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

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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.").

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

[79] *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.").

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

[81] *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.

[82] *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.").

evidence standard.[83] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[84]

B. Conditions of Competition and the Business Cycle

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

1. Captive Production

The domestic industry captively consumes a portion of its production of hexamine in the production of downstream phenolic resins. We therefore consider the applicability of the statutory captive production provision, and whether the Commission should focus its analysis primarily on the merchant market when assessing market share and the factors affecting the financial performance of the domestic industry.[85]

a) Arguments of the Parties

Petitioner's Arguments. Petitioner argues that the captive production provision does not apply in these investigations because hexamine is not the predominant input into the downstream product that it produces using hexamine, which is phenolic resins. Petitioner

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

[84] *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.").

[85] The captive production provision, 19 U.S.C. § 1677(7)(C)(iv), as amended by the Trade Preferences Extension Act of 2015 ("TPEA"), provides:

> (iv) CAPTIVE PRODUCTION – If domestic producers internally transfer significant production of the domestic like product for the production of a downstream article and sell significant production of the domestic like product in the merchant market, and the Commission finds that-
>
> (I) the domestic like product produced that is internally transferred for processing into that downstream article does not enter the merchant market for the domestic like product, and
>
> (II) the domestic like product is the predominant material input in the production of that downstream article;
>
> then the Commission, in determining market share and the factors affecting financial performance set forth in clause (iii), shall focus primarily on the merchant market for the domestic like product.

The SAA indicates that where a domestic like product is transferred internally for the production of another article coming within the definition of the domestic like product, such transfers do not constitute internal transfers for the production of a "downstream article" for purposes of the captive production provision. SAA at 853.

observes that when the domestic like product is not the predominant input, but a significant portion is captively consumed, the Commission has considered it to be a relevant condition of competition.[86]

Respondents' Arguments. Respondent did not address the provision's application in these investigations.

b) Analysis

We determine that the threshold criterion for application of the captive production provision has been met. The provision can be applied only if, as a threshold matter, significant production of the domestic like product is internally transferred and significant production is sold in the merchant market. In these investigations, between *** and *** percent of the U.S. producer's U.S. shipments of hexamine by quantity were internally consumed or transferred to related firms.[87] The domestic industry sold between *** percent and *** percent of its hexamine production on the merchant market in this period.[88] Because both internal consumption and merchant market sales constitute significant portions of the domestic industry's production, the threshold criterion for applying the captive production provision is satisfied.

We also determine that the first statutory criterion – whether any of the domestic like product that is transferred internally for further processing is in fact sold on the merchant market – has been met.[89] Petitioner, the sole domestic producer, did not divert hexamine that was to be internally consumed to the merchant market.[90]

In applying the second statutory criterion, we generally consider whether the domestic like product is the predominant material input into a downstream product by referring to its share of the raw material cost of the downstream product.[91] In previous investigations, the

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[86] Petitioner's Postconference Brief, Answer to Staff Question 1.

[87] CR/PR at Table III-7. Bakelite reported *** percent of its U.S. shipments in 2021 were transfers to related firms. *Id.* at III-8.

[88] CR/PR at Table III-7.

[89] *See*, *e.g.*, *Hot-Rolled Steel Products from Argentina and South Africa*, Inv. Nos. 701-TA-404, 731-TA-898, 905 (Final), USITC Pub. 3446 (Aug. 2001) at 15-16; *Certain Cold-Rolled Steel Products from Argentina, Brazil*, *China*, *Indonesia*, *Japan*, *Russia*, *Slovakia*, *South Africa*, *Taiwan*, *Turkey and Venezuela*, Inv. Nos. 701-TA-393 and 731-TA-829-40 (Final) (Remand), USITC Pub. 3691 (May 2004) at 2 & n.19.

[90] CR/PR at III-12.

[91] *See generally, e.g., Polyethylene Terephthalate Film, Sheet and Strip from Brazil, China, Thailand, and the United Arab Emirates*, Inv. Nos. 731-TA-1131-1134 (Final), USITC Pub. 4040 (Oct. 2008) at 17 n.103*; Polyethylene Terephthalate Film, Sheet, and Strip from India and Taiwan*, Inv. Nos. 701-TA-415 and 731-TA-933-34 (Final), USITC Pub. 3518 (June 2002) at 11 & n.51. The Commission has construed "predominant" material input to mean the main or strongest element, and not necessarily a (Continued…)

Commission construed "predominant" material input to mean the main or strongest element, and not necessarily a majority of the inputs by value.[92] In these investigations, the sole domestic producer indicated that hexamine accounted for *** percent of the cost of the downstream *** it produced from hexamine.[93] Thus, this criterion is not satisfied in these investigations.

In sum, we find that the criteria for application of the captive production provision are not satisfied in these preliminary phase investigations. Accordingly, we do not apply the captive production provision and will focus on the overall hexamine market in analyzing the market share and financial performance of the domestic industry. We nonetheless consider, as a relevant condition of competition, that a significant portion of domestic production is captively consumed.

2. Demand Conditions

U.S. demand for hexamine depends on demand for U.S.-produced downstream products, including explosives, resins, plastics, tires, rubber molding compounds, cleaning products, and resin coated frack sands.[94] The U.S. producer reported that there was *** in U.S. demand for hexamine during the POI.[95] The majority of responding importers reported that U.S. demand for hexamine either decreased or did not change.[96]

Apparent U.S. consumption by quantity decreased by *** percent between 2021 and 2023, decreasing from *** pounds in 2021 to *** pounds in 2022 and *** pounds in 2023.[97] It was *** percent lower in January to June 2024 ("interim 2024") than in January to June 2023 ("interim 2023").[98]

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majority, of the inputs by value. *See Polyvinyl Alcohol from Germany and Japan*, Inv. Nos. 731-TA-1015-16 (Final), USITC Pub. 3604 (June 2003) at 15 n.69.

[92] *See Polyvinyl Alcohol from Germany and Japan*, Inv. Nos. 731-TA-1015-1016 (Final), USITC Pub. 3604 (June 2003) at 15, n. 69, citing 2 New Shorter Oxford English Dictionary 2329 (1993). The Commission reaffirmed this approach in *Polyvinyl Alcohol from Taiwan*, Inv. No. 731-TA-1088 (Preliminary), USITC Pub. 3732 at 16 (Oct. 2004).

[93] CR/PR at III-13 and Table III-9.

[94] CR/PR at I-9 and II-8. The U.S. producer reported that the U.S. market for hexamine is subject to the business cycles of the various end user's market sectors. Tr. at 28 (Kanna). Three of nine importers reported that the market was subject to business cycles. CR/PR at II-9.

[95] CR/PR at Table II-5.

[96] CR/PR at Table II-5.

[97] CR/PR at Tables IV-10, C-1.

[98] CR/PR at Tables IV-9 and C-1. U.S. merchant market consumption by quantity decreased by *** percent between 2021 and 2023, decreasing from *** pounds in 2021 to *** pounds in 2022 and *** pounds in 2023. *Id.* at Tables IV-11 and C-2. It was *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). *Id.*

3. Supply Conditions

The domestic industry was the largest supplier of hexamine to the U.S. market during the POI. The industry's share of apparent U.S. consumption increased irregularly by *** percentage points between 2021 and 2023, increasing from *** percent in 2021 to *** percent in 2022, then declining to *** percent in 2023.[99] The domestic industry's share of apparent U.S. consumption in interim 2024 was *** percent, *** percentage points higher than in interim 2023.[100] The domestic industry's practical capacity increased by *** percent from 2021 to 2023, and its practical capacity utilization rate increased from *** percent in 2021 to *** percent in 2022 before declining to *** percent in 2023; it was *** percent in interim 2024, up from *** percent in interim 2023.[101]

Cumulated subject imports were the smallest source of supply to the U.S. market during the three full years of the POI, and the second largest source in interim 2024. Subject imports lost *** percentage points of total market share from 2021 to 2023, declining irregularly from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023.[102] Subject imports' market share reached its peak during the POI in interim 2024 and was *** percentage points higher than in interim 2023.[103]

Nonsubject imports were the second largest source of supply to the U.S. market during the three full years of the POI, declining to the smallest source in interim 2024. The share of apparent U.S. consumption held by nonsubject imports declined from *** percent in 2021 to

[99] CR/PR at Tables IV-9 and C-1.

[100] CR/PR at Tables IV-9 and C-1. The industry's share of U.S. merchant market consumption increased irregularly by *** percentage points between 2021 and 2023, increasing from *** percent in 2021 to *** percent in 2022, then declining to *** percent in 2023. *Id* at Tables IV-11 and C-2. The domestic industry's share of U.S. merchant market consumption in interim 2024 was *** percent, *** percentage points higher than in interim 2023. *Id.* at Tables IV-11 & C-2.

[101] CR/PR at Tables III-4 and C-1. The industry's practical capacity was unchanged between interim periods.

[102] CR/PR at Tables IV-9 and C-1.

[103] CR/PR at Tables IV-9 and C-1. Subject imports' total market share was *** percent in interim 2023 and *** percent in interim 2024. *Id.*

Subject imports lost *** percentage points of merchant market share from 2021 to 2023, declining irregularly from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023. CR/PR at Tables IV-11, C-2. Subject imports' merchant market share in interim 2024 was *** percentage points higher than in interim 2023. Subject imports' merchant market share was *** percent in interim 2023 and *** percent in interim 2024. *Id.*

*** percent in 2022, and to *** percent in 2023.[104] Nonsubject imports' total market share was *** percentage points lower in interim 2024 than in interim 2023.[105]

Russia accounted for almost all nonsubject imports during the three full years of the POI.[106] From 2021 to 2023, Russia was the largest source of U.S. imports of hexamine.[107] Because of hexamine's use as an explosive in military applications, imports from Russia began to decline leading up to Russia's invasion of Ukraine.[108] Imports from Russia exited the U.S. market entirely in July 2023 when Russian authorities seized control of Metafrax Chemicals, the largest Russian hexamine producer.[109] U.S. shipments of imported hexamine from Russia continued in interim 2024 as importers sold off existing inventories.[110]

The sole U.S. producer reported no supply constraints, while five of eight responding importers reported that they had experienced supply constraints since January 1, 2021.[111] Importers reported that constraints included supply chain disruptions and higher freight costs due to the ongoing war between Russia and Ukraine.[112]

4. Substitutability and Other Conditions

Based on the record in the preliminary phase of these investigations, we find that there is a moderate-to-high degree of substitutability between domestically produced hexamine and hexamine imported from subject sources. Hexamine is a chemical product that is produced to a particular formulation and all hexamine shares the same physical characteristics.[113] The U.S. producer reported that U.S. produced hexamine and subject imports were always or frequently interchangeable.[114] Half of responding importers reported that the domestic product is frequently interchangeable with subject imports from China, India, and Saudi Arabia, and all

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[104] CR/PR at Tables IV-9 and C-1.

[105] CR/PR at Tables IV-9 and C-1. Nonsubject imports' total market share was *** percent in interim 2023 and *** percent in interim 2024. *Id.*

The share of U.S. merchant market consumption held by nonsubject imports declined from *** percent in 2021 to *** percent in 2022, and to *** percent in 2023. CR/PR at Tables IV-11 & C-2. Nonsubject imports' merchant market share was *** percentage points lower in interim 2024 than in interim 2023. *Id.* Nonsubject imports' merchant market share was *** percent in interim 2023 and *** percent in interim 2024. *Id.*

[106] CR/PR at Tables C-1 and C-2.

[107] CR/PR at II-1 and Table IV-2.

[108] CR/PR at II-1.

[109] CR/PR at II-1, Table IV-8.

[110] CR/PR at VII-22, Table C-1.

[111] CR/PR at II-8.

[112] CR/PR at II-8.

[113] CR/PR at I-10-I-13; Tr. at 62 (Ojha).

[114] CR/PR at Table II-7.

responding importers reported that subject imports from Germany are always or frequently interchangeable with the domestic product.[115] None of the responding U.S. importers reported that U.S. produced hexamine and subject imports were never interchangeable.[116]

We also find that price is an important factor, among others, in purchasing decisions. Purchasers identified price among the top three factors more than any other factor.[117] The U.S. producer said differences other than price between subject imports and the domestic product were sometimes or never significant while at least half of the responding importers reported that there were always or frequently significant differences other than price between the domestic like product and subject imports.[118]

The *** majority of hexamine sold by the U.S. producer is to end users with the remainder being made to distributors, while U.S. importers of subject merchandise made *** of their sales to end users.[119]

The domestic producer manufactured hexamine from ammonia, which it purchased, and formaldehyde, which it produced.[120] Raw material costs represent the largest component of the domestic industry's COGS, and they increased as a share of COGS from *** percent in 2021 to *** percent in 2023.[121] Raw materials as a share of COGS were *** percent in interim 2023 and *** percent in interim 2024.[122]

During the POI, subject imports from China were subject to additional 25 percent *ad valorem* duties pursuant to Section 301 of the Trade Act of 1974, as amended ("Section 301").[123]

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

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

[117] CR/PR at Table II-6. Purchasers most frequently cited availability/supply as the first-most important purchasing factor. *Id*.

[118] CR/PR at Tables II-9 and II-10. Importers reported quality and high shipping costs of subject imports from China compared to the domestic like product, and others reported quality, supply availability, transportation, just-in-time deliveries, and competition against the domestic producer for downstream products as significant factors when comparing U.S. produced hexamine to hexamine from certain subject countries. *Id.* at II-15.

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

[120] CR/PR at V-1.

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

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

[123] CR/PR at I-8 and nn.11-12.

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."[124]

Cumulated subject imports decreased irregularly from *** pounds in 2021 to *** pounds in 2022, then increased to *** pounds in 2023.[125] Cumulated subject imports were *** pounds in interim 2023 and higher, at *** pounds, in interim 2024 – higher than they were for the entire year of 2021, 2022, or 2023.[126]

U.S. shipments of cumulated subject imports as a share of apparent U.S. consumption declined irregularly from *** percent of apparent U.S. consumption in 2021 to *** percent in 2022, before increasing to *** percent in 2023, for an overall decline of *** percentage points.[127] Cumulated subject imports were *** percent of apparent U.S. consumption in interim 2024, *** percentage points greater than in interim 2023 at *** percent, and the highest level of the POI.[128]

Based on the record in the preliminary phase of these investigations, we find that the volume of cumulated subject imports during the POI was significant in absolute terms and relative to consumption in the United States, and that the increase in the volume of subject imports in interim 2024 was significant in absolute terms and relative to apparent consumption in the United States.

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

[124] 19 U.S.C. § 1677(7)(C)(i).

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

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

[127] CR/PR Tables IV-9 and C-1.

[128] CR/PR at Tables IV-9 and C-1. Cumulated subject imports as a share of U.S. merchant market consumption declined irregularly from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023, for an overall decline of *** percentage points. CR/PR at Tables IV-11 and C-2. Cumulated subject imports were *** percent of U.S. merchant market consumption in interim 2024, *** percentage points greater than in interim 2023 at *** percent. *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.[129]

As discussed in section VII.B.3, above, we find that there is a moderate-to-high degree of substitutability between cumulated subject imports and the domestic like product, and that price is an important factor in purchasing decisions for hexamine.

The Commission collected quarterly quantity and f.o.b. value pricing data on sales of three types of hexamine shipped to unrelated U.S. customers during the POI.[130] One U.S. producer 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.[131] The pricing data reported by these firms accounted for 100.0 percent of U.S. producers' U.S. commercial shipments of domestically produced hexamine, *** percent of U.S. shipments of subject imports from China, *** percent of U.S. shipments of subject imports from Germany, *** percent of U.S. shipments of subject imports from India, and *** percent of U.S. shipments of subject imports from Saudi Arabia in 2023.[132]

Subject imports undersold the domestic like product in 34 of 52 quarterly comparisons, or 65.4 percent of the time, with underselling margins ranging between *** and *** percent, and averaging *** percent.[133] Subject imports oversold the domestic like product in the remaining 18 quarterly comparisons, or 34.6 percent of the time, with overselling margins ranging between *** percent and *** percent and averaging *** percent.[134] The volume of subject import sales in quarters with underselling was *** pounds, representing *** percent of the total volume of subject imports in the pricing products, compared to *** pounds in the quarters with overselling, representing *** percent of the total.[135] The frequency of underselling and volume of subject imports associated with underselling increased at the end of

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[129] 19 U.S.C. § 1677(7)(C)(ii).

[130] CR/PR at V-5. The three pricing products are:

Product 1. – "Unstabilized" hexamine, with a hexamine content above 99% by weight.

Product 2. – "Stabilized" hexamine, with a hexamine content above 95% but less than or equal to 99% by weight.

Product 3. – "Stabilized" hexamine, with a hexamine content equal to or below 95% by weight.

[131] CR/PR at V-5.

[132] CR/PR at V-5. Commercial shipments do not include the domestic producer's captive consumption of a portion of its production of hexamine. Pricing coverage is based on U.S. shipments reported in the questionnaires.

[133] CR/PR Table V-10.

[134] CR/PR Table V-10.

[135] Calculated from CR/PR Table V-10.

the POI, with subject imports underselling the domestic like product in 9 out of 13 instances in January through June 2024.[136] Thus, the quarterly price comparison data show that subject imports predominantly undersold the domestic like product in terms of the number of quarterly comparisons and in terms of volume.[137] Based on the moderate-to-high degree of substitutability between subject imports and the domestic like product, the importance of price in purchasing decisions, and the underselling, we find that cumulated subject imports significantly undersold the domestic like product.

We also find that the underselling resulted in subject imports gaining sales and market share rapidly at the end of the POI. As discussed above, nonsubject imports from Russia exited the U.S. market in 2023. Russia had previously constituted almost all nonsubject imports, and accounted for *** percent of apparent U.S. consumption in 2021, decreasing to *** percent in 2022, and *** percent in 2023.[138] In interim 2024, its share fell to *** percent of apparent domestic consumption, as compared to its *** percent share in interim 2023.[139] Subject imports took *** of the market share ceded by imports from Russia, as subject imports increased to a *** percent share of apparent U.S. consumption in interim 2024 that was *** their *** percent share in interim 2023.[140] The domestic producer gained relatively little of the volume previously served by nonsubject imports, with its *** percent share of apparent U.S. consumption in interim 2024 a mere *** percentage points higher than its *** percent share in interim 2023.[141] Given the degree of substitutability between

[136] CR/PR at Table V-12. In interim 2024, there were *** pounds of subject import sales in the quarters with underselling, representing *** percent of the volume of subject imports in the pricing data in interim 2024. *Id*.

[137] We have also considered purchasers' responses to the Commission's lost sales/lost revenue survey. Of the three responding purchasers, one reported that it bought subject imports instead of the domestic like product and that subject imports were lower priced than the domestic product, but that price was not a primary reason for purchasing subject imports instead of the domestic product. CR/PR at Table V-14. The purchaser reported that it purchased subject imports rather than the domestic product because the U.S. producer is a direct competitor. *Id.* at V-21.

[138] CR/PR at Tables IV-9 and C-1.

[139] CR/PR at Table C-1. Imports from Russia accounted for *** percent of U.S. merchant market consumption in 2021, decreasing to *** percent in 2022, and *** percent in 2023. In interim 2024, its merchant market share fell to *** percent, as compared to its *** percent share in interim 2023. *Id.* at Table C-2.

[140] CR/PR at Tables IV-9 and C-1. Subject imports held *** percent share of U.S. merchant market consumption in interim 2024 compared to their *** percent share in interim 2023. *Id.* at Tables IV-11 and C-2.

[141] CR/PR at Tables IV-9 and C-1. The domestic industry held a *** percent share of U.S. merchant market consumption in interim 2024 and a *** percent share in interim 2023. *Id.* at Tables IV-11 and C-2.

subject imports and the domestic like product and the importance of price in purchasing decisions, we find, for preliminary phase purposes, that significant underselling by subject imports prevented the domestic industry from gaining substantially more market share in interim 2024.[142] [143]

We have also examined price trends during the POI.[144] Prices for U.S.-produced pricing products 1 and 3 increased from 2021 through the second quarter of 2024.[145] Reported prices for domestically produced products 1 and 3 were, respectively, *** and *** percent higher at the end of the POI than at the beginning.[146] Prices for domestically produced product 2 increased through the third quarter of 2022 and then decreased back to their original level at the end of the POI.[147] Prices for products 1 and 2 imported from subject sources fluctuated over the course of the POI but increased overall.[148]

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[142] As nonsubject imports' share of total market apparent U.S. consumption declined by *** percentage points between interim periods, the domestic industry increased its share by *** percentage points and cumulated subject imports increased their share by substantially more, *** percentage points. CR/PR at Tables IV-9 and C-1. In the merchant market, nonsubject imports' market share declined by *** percentage points between interim periods, while the domestic industry increased its share by *** percentage points and cumulated subject imports increased their share by *** percentage points. *Id*. at Tables IV-11 and C-2. We will examine further in any final phase investigations whether and to what extent the domestic industry should have gained more market share than it did during the POI given exiting nonsubject imports.

[143] Chair Karpel likewise finds that cumulated subject imports undersold the domestic like product to a significant degree. She observes, however, that the domestic industry gained market share over the POI. The domestic industry gained *** percentage points of market share from 2021 to 2023 and an additional *** percentage points of market share over the interim period. She acknowledges that the domestic industry's gain in market share was less than subject imports' gain in market share over the full POI as Russian imports left the market and that this may indicate that subject import underselling allowed subject imports to gain market share that otherwise would have gone to domestic producers. However, she finds the record in the preliminary phase of these investigations is underdeveloped on this point and since, as discussed in her separate views, Chair Karpel finds that the record in the preliminary phase of these investigations supports a finding that the domestic industry is threatened with material injury by reason of subject imports, she declines to join the majority in finding that the significant underselling by subject imports prevented the domestic industry from gaining substantially more market share in interim 2024.

[144] The Commission received responses from three purchasers concerning alleged lost revenues; two reported that the U.S. producer *** lower prices due to competition with lower-priced subject imports and the third reported it that ***. CR/PR at Table V-16

[145] CR/PR Table V-7.

[146] CR/PR Table V-7.

[147] CR/PR Table V-7.

[148] CR/PR at Tables V-4 to V-5, V-9. Subject imports of product 3 were only present in two quarters of the POI and price trends for imported product 3 are thus not discernible. *Id.* at Table V-6.

We have also considered whether cumulated subject imports prevented price increases for domestically produced hexamine that otherwise would have occurred to a significant degree. The record shows that the domestic industry's ratio of COGS to net sales increased irregularly from 2021 to 2023, increasing from *** percent in 2021 to *** percent in 2022 and declining to *** percent in 2023, for a *** percentage point increase over the three full years of the POI.[149] The domestic industry's ratio of COGS to net sales was higher in interim 2024, at *** percent, than in interim 2023, at *** percent.[150] The domestic industry's unit net sales AUVs increased by $*** per pound from $*** per pound in 2021 to $*** per pound in 2022 and decreased by $*** per pound from $*** per pound in 2022 to $*** per pound in 2023, for an overall increase of $*** per pound, or *** percent.[151] The domestic industry's unit COGS increased by $*** per pound from $*** per pound in 2021 to $*** per pound in 2022 and decreased by $*** per pound from $*** per pound in 2022 to $*** per pound in 2023, for an overall increase of $*** per pound, or *** percent.[152] Apparent U.S. consumption declined throughout this period, by *** percent between 2021 and 2022 and by *** percent between 2022 and 2023, for an overall decrease of *** percent.[153] Over the interim periods, the industry's net sales AUV decreased by $*** per pound, or *** percent, and unit COGS decreased by $*** per pound, or *** percent.[154] Apparent U.S. consumption declined by *** percent over the interim periods.[155]

In sum, based on the record of the preliminary phase of these investigations, we find that subject imports significantly undersold the domestic like product and prevented the domestic industry from gaining substantially more market share in interim 2024. Accordingly, we conclude that subject imports had significant adverse price effects.[156]

[149] CR/PR at Tables VI-1 and C-1.

[150] CR/PR at Tables VI-1 and C-1. For the domestic producer's merchant market sales, its ratio of COGS to net sales increased from 2021 to 2023, increasing from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for a *** percentage point increase over the three full years of the POI. *Id.* at Table C-2. The domestic industry's ratio of COGS to net sales was higher in interim 2024, at *** percent, than in interim 2023, at *** percent. *Id.*

[151] CR/PR at Tables VI-1 and C-1.

[152] CR/PR at Tables VI-1 and C-1.

[153] CR/PR at Tables IV-9 and C-1.

[154] CR/PR at Tables VI-1 and C-1.

[155] CR/PR at Tables IV-9 and C-1.

[156] As noted, Chair Karpel does not join this finding. As explained in her Separate Views, Chair Karpel finds that subject imports threaten significant adverse price effects.

E. Impact of the Subject Imports[157]

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."[158]

The domestic industry's practical capacity increased by *** percent from 2021 to 2023, and was *** in the interim period comparison.[159] The industry's production increased by *** percent from 2021 to 2023, and was *** percent higher in interim 2024 as compared to interim 2023.[160] Its practical capacity utilization rate declined irregularly by *** percentage points over the three full years of POI, increasing from *** percent in 2021 to *** percent in 2022 and then decreasing to *** percent in 2023; it was *** percentage points higher in interim 2024 than in interim 2023.[161]

The domestic industry's number of production-related workers ("PRWs") *** from 2021 to 2023, at *** PRWs.[162] Its total hours worked remained the *** between 2021 and 2023, at *** hours.[163] The domestic industry's wages paid decreased by *** percent between 2021 and

[157] In its notice initiating the antidumping duty investigations, Commerce initiated investigations based on estimated dumping margins of 405.19 percent for imports from China; 104.72 to 111.24 percent for imports from Germany, 105.76 percent for imports from India; and 292.32 percent for imports from Saudi Arabia. *Hexamethylenetetramine From the People's Republic of China, Germany, India, and Saudi Arabia: Initiation of Antidumping Duty Investigations*, 89 Fed. Reg. 87545, 87548 (Nov. 4, 2024).

[158] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act ("TPEA") of 2015, Pub. L. 114-27.

[159] CR/PR at Tables III-4 and C-1. The domestic industry's practical hexamine capacity increased from *** pounds in 2021 to *** pounds in 2022, and *** pounds in 2023. CR/PR at Table III-4. The domestic industry's practical hexamine capacity in each of the interim periods was *** pounds. *Id.*

[160] CR/PR at Table C-1. The domestic industry's production increased from *** pounds in 2021 to *** pounds in 2022 and then decreased to *** pounds in 2023. CR/PR at Table III-4. Production was higher in interim 2024, at *** pounds, than in interim 2023, at *** pounds. *Id.*

[161] CR/PR at Table III-4. In interim 2023, capacity utilization was *** percent and in interim 2024, it was *** percent. *Id.*

[162] CR/PR at Table III-11.

[163] CR/PR at Table III-11.

2023, rising from $*** in 2021 to $*** in 2022, then decreasing to $*** in 2023.[164] Productivity (in pounds per hour) increased irregularly by *** percent from 2021 to 2023, increasing from *** pounds per hours in 2021 to *** pounds per hour in 2022, then decreasing to *** pounds per hour in 2023.[165] Productivity was *** pounds per hour in interim 2023 and higher, at *** pounds per hour in interim 2024.

The volume of the domestic industry's U.S. shipments increased irregularly by *** percent from 2021 to 2023, from *** pounds in 2021 to *** pounds in 2022 then declining to *** pounds in 2023.[166] U.S. shipments were higher in interim 2024 (*** pounds) than in interim 2023 (*** pounds).[167] The domestic industry's share of apparent U.S. consumption increased from *** percent in 2021 to *** percent in 2022 before declining to *** percent in 2023, for an overall increase of *** percentage points from 2021 to 2023.[168] The domestic industry's share of apparent U.S. consumption was *** percent in interim 2024, which was higher than it *** percent share in interim 2023.[169]

The domestic industry's end-of-period inventories decreased by *** percent from 2021 to 2023, decreasing from *** pounds in 2021 to *** pounds in 2022 and *** pounds in 2023.[170] End-of-period inventories were lower in interim 2024, at *** pounds, than in interim 2023, at *** pounds.[171] As a ratio to total U.S. shipments, the domestic industry's end-of-period inventories decreased from *** percent of U.S total shipments in 2021 to *** percent in 2022 and 2023; they were *** percent in interim 2024, which was lower than the *** ratio in interim 2023.[172]

The trends in the domestic industry's financial performance varied during the POI. Its total net sales value increased from $*** in 2021 to $*** in 2022, before declining to $*** in

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[164] CR/PR at Tables III-11 and C-1.

[165] CR/PR at Tables III-11 and C-1.

[166] CR/PR at Tables III-7 and C-1.

[167] CR/PR at Tables III-7 and C-1. The volume of the domestic industry's commercial U.S. shipments in the merchant market increased irregularly by *** percent from 2021 to 2023, from *** pounds in 2021 to *** pounds in 2022, then decreasing to *** pounds in 2023. CR/PR at Table C-2. Commercial shipments in the merchant market were higher in interim 2024 (***) pounds than in interim 2023 (***) pounds. *Id.*

[168] CR/PR Tables IV-9 and C-1.

[169] CR/PR at Tables IV-9 and C-1. The domestic industry's share of U.S. merchant market consumption increased from *** percent in 2021 to *** percent in 2022 before declining to *** percent in 2023, for an overall increase of *** percentage points from 2021 to 2023. CR/PR at Tables IV-11 and C-2. The domestic industry's share of merchant market consumption was *** percent in interim 2024, which was higher than its *** percent share in interim 2023. *Id.*

[170] CR/PR at Tables III-10 and C-1.

[171] CR/PR at Table III-10.

[172] CR/PR at Table III-10.

2023 for an overall increase *** percent from 2021 to 2023.[173] The domestic industry's net sales value in interim 2024, at $*** was lower than interim 2023, at $***.[174] The domestic industry's gross profits increased from $*** in 2021 to $*** in 2022, before declining to $*** in 2023, for an overall decrease of *** percent from 2021 to 2023.[175] The domestic industry's gross profits were *** percent lower in interim 2024 ($***) than in interim 2023 ($***).[176] The domestic industry's operating income increased from $*** in 2021 to $*** in 2022, before declining to $*** in 2023, for an overall decrease of *** percent from 2021 to 2023.[177] The domestic industry's operating income was *** percent lower in interim 2024 ($***) than in interim 2023 ($***).[178] Its net income increased from $*** in 2021 to $*** in 2022, before declining to $*** in 2023, for an overall decrease of *** percent from 2021 to 2023.[179] The domestic industry's net income was lower in interim 2024 ($***) than in interim 2023 ($***).[180]

As a ratio to net sales, the domestic industry's operating income was high in absolute terms throughout the POI but decreased from *** percent in 2021 to *** percent in 2022, then increased to *** percent in 2023, for an overall decrease of *** percentage points from 2021 to 2023; its ratio of operating income to net sales was *** percent in interim 2024, *** percentage points lower than in interim 2023.[181] The domestic industry's ratio of net income to sales was also high in absolute terms throughout the POI but declined from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall decrease of *** percentage

[173] CR/PR at Tables VI-1 and C-1.

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

[175] CR/PR at Tables VI-1 and C-1.

[176] CR/PR at Tables VI-1 and C-1. For its merchant market operations sales, the domestic industry's gross profits increased from $*** in 2021 to $*** in 2022, then declining to $*** in 2023, for an overall increase of *** percent from 2021 to 2023. CR/PR at Table C-2. Its gross profits were *** percent lower in interim 2024 ($***) than in interim 2023 ($***). *Id.*

[177] CR/PR at Tables V-1 and C-1.

[178] CR/PR at Tables VI-1 and C-1.

[179] CR/PR at Tables VI-1 and C-1. For its merchant market operations, the domestic industry's operating income increased from $*** in 2021 to $*** in 2022, before declining to $*** in 2023, for an overall increase of *** percent from 2021 to 2023. CR/PR at Table C-2. Its operating income was *** percent lower in interim 2024 ($***) than in interim 2023 ($***). *Id.* Its net income from commercial sales increased from $*** in 2021 to $*** in 2022, before declining to $*** in 2023, for an overall decrease of *** percent from 2021 to 2023. *Id.* Its ratio of operating income to net sales decreased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023; it was lower in interim 2024 at *** percent than in interim 2023 at *** percent. *Id*.

[180] CR/PR at Tables VI-1 and C-1.

[181] CR/PR at Tables VI-1 and C-1.

points from 2021 to 2023; its ratio of net income to net sales was *** percent in interim 2024, *** percentage points lower than in interim 2023.[182]

The domestic industry's capital expenditures declined from $*** in 2021 to $*** in 2022, to $*** in 2023, for an overall decline of *** percent.[183] Capital expenditures in interim 2023 were $*** and higher, at $***, in interim 2024.[184] The domestic industry's R&D expenses were $*** in 2021, $*** in 2022, $*** in 2023, $*** in interim 2023, and $*** in interim 2024.[185] The sole domestic producer reported negative effects on its investment and growth and development due to subject imports.[186]

We have found that the volume of cumulated subject imports was significant in absolute terms and relative to apparent U.S. consumption during the POI and that the increase in the volume of subject imports in interim 2024 was significant in absolute terms and relative to apparent U.S. consumption. We have also found that subject imports significantly undersold the domestic like product and prevented the domestic industry from gaining substantially more market share in interim 2024 when Russian imports exited the U.S. market.[187] As a consequence, we find that the subject imports caused the domestic industry's production, capacity utilization, U.S. shipments, market share, revenues, operating income, and net income to be lower than they would otherwise have been in interim 2024. Accordingly, we conclude that subject imports had a significant adverse impact on the domestic industry.[188]

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[182] CR/PR at Tables VI-1 and C-1. For its merchant market operations, the domestic industry's operating income ratio decreased from *** percent in 2021 to *** percent in 2022, to *** percent in 2023, for an overall decrease of *** percentage points from 2021 to 2023; operating income ratio was *** percent in interim 2024, *** percentage points lower than in interim 2023. CR/PR at Table C-2. Its net income ratio declined from *** percent in 2021 to *** percent in 2022, to *** percent in 2023, for an overall decrease of *** percentage points from 2021 to 2023; its net income ratio was *** percent in interim 2024, *** percentage points lower than in interim 2023.

[183] CR/PR at Tables VI-8 and C-1.

[184] CR/PR at Tables VI-8 and C-1.

[185] CR/PR at Table VI-8.

[186] CR/PR at Table VI-11.

[187] We also observe that cumulated subject imports increased their market share at the expense of the domestic industry from 2022-2023. In the total market, cumulated subject imports increased their market share by *** percentage points from 2022-2023 as the domestic industry lost *** percentage points of market share. CR/PR at Tables IV-9 and C-1. In the merchant market, cumulated subject imports increased their market share by *** percentage points from 2022-2023 as the domestic industry lost *** percentage points of market share. *Id*. at Tables IV-11 and C-2.

[188] Chair Karpel does not join the last three sentences of this paragraph. Her finding that subject imports threaten the domestic industry with material injury are explained in her Separate Views.

We have considered Respondent's argument that the domestic industry did not have sufficient capacity to meet demand.[189] The record, however, shows that the domestic producer had available practical capacity throughout the POI.[190] The domestic industry operated at a practical capacity utilization rate of *** percent in 2021, *** percent in 2022, and *** percent in 2023.[191] In interim 2024, the domestic industry's practical capacity utilization rate was *** percent.[192] The domestic industry was thus able to supply additional hexamine based on its existing practical capacity throughout the POI. The domestic industry had nearly *** pounds of unused practical capacity in interim 2024, enough to supply nearly *** the increase in shipments of subject imports in interim 2024 compared to interim 2023.[193] The domestic producer also reported no supply constraints during the POI.[194] Consequently, we find for preliminary phase purposes that the domestic industry could have supplied the U.S. market with substantially more hexamine than it did, but for the increase in low-priced cumulated subject imports.[195]

We have also considered whether there are other factors that may have had an impact on the domestic industry to ensure that we are not attributing injury from such other factors to subject imports. Nearly all nonsubject imports during the POI were from Russia. Between 2021 and 2023, nonsubject imports' share of apparent U.S. consumption declined from *** percent in 2021 to *** percent in 2022 and *** percent in 2023.[196] In interim 2024, nonsubject imports' share of apparent U.S. consumption was *** percent, the lowest level of the POI, and substantially lower than their *** percent share in interim 2023.[197] Thus, during the period in which we find injury to the domestic industry, U.S. shipments of nonsubject imports dramatically declined as a share of apparent U.S. consumption. Consequently, nonsubject

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[189] KCIL's Postconference Brief at 3. We note that there is no requirement in the statute that the domestic industry be able to supply all demand in the U.S. market. *See Crystalline Silicon Photovoltaic Cells and Modules from China*, Inv. Nos. 701-TA-481 and 731-TA-1190 (Preliminary), USITC Pub. 4295 (Dec. 2011) at 30 n.195 ("the fact that the domestic industry may not be able to supply all of demand does not mean the industry may not be materially injured or threatened with material injury by reason of subject imports").

[190] CR/PR at II-7, Table III-4.

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

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

[193] CR/PR at Table C-1. The volume of subject imports increased by *** pounds from interim 2023 to interim 2024.

[194] CR/PR at II-8.

[195] Chair Karpel does not this paragraph. Her finding that subject imports threaten the domestic industry with material injury are explained in her Separate Views.

[196] CR/PR at Table IV-9 and C-1.

[197] CR/PR at Tables IV-9 and C-1.

imports do not explain the injury we have attributed to cumulated subject imports. Declining demand also does not explain the injury we have attributed to cumulated subject imports. While apparent U.S. consumption declined by *** percent from 2021-2023 and by *** percent between interim periods, the domestic industry would have performed substantially better if increasing volumes of low-priced subject imports had not prevented it from further increasing its market share when Russian imports exited the market.[198] [199]

In sum, based on the record of the preliminary phase of these investigations, we find that subject imports had a significant impact on the domestic industry. Consequently, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of cumulated subject imports.

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 imports of hexamine from China, Germany, India, and Saudi Arabia that are allegedly sold in the United States at LTFV and imports of hexamine from China and India that are allegedly subsidized by the governments of China and India.

[198] In any final phase of these investigations, we invite Petitioner to provide information on long-term contracts and their role in the U.S. market; explanation for the trends in its employment data and the magnitude of its operating and net income margins during the POI; and any documentation of competition between the domestic like product and subject imports.

[199] Chair Karpel does not this paragraph. Her findings on nonattribution are detailed in her Separate Views.

CHAIR AMY A. KARPEL

SEPARATE VIEWS ON THREAT OF MATERIAL INJURY

Chair Karpel finds that there is a reasonable indication that an industry in the United States is threatened with material injury by reason of subject imports. Chair Karpel finds that Petitioner's arguments are notably underdeveloped on whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports. While Petitioner argues that subject import underselling allowed subject imports to gain market share, subject imports gained market share only at the expense of nonsubject imports and Petitioner has not presented arguments that underselling, which led to a market share gain by subject imports at the expense of nonsubject imports, resulted in present material injury to the domestic industry.[1]

However, Petitioner has developed arguments that support a finding that subject imports threaten the domestic industry with material injury.[2] In particular, Petitioner points to, *inter alia*, the expanded production capacity of major subject foreign producers, the U.S. market as a primary export target for all four subject countries, and the rapid increase in the volume of subject imports toward the end of the POI.[3]

Chair Karpel finds that the record supports a finding of threat of material injury. While subject imports held a decreasing share of the U.S. market in the 2021-2023 period, as Russia, which accounted for nearly all nonsubject imports, exited the U.S. market in late 2023 into the

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[1] For example, the totality of Petitioner's argument in its post-conference brief regarding price effects is as follows: "

> {T}he record information before the Commission demonstrates that subject imports undersold the domestic like product to a significant degree, and that subject imports depressed and suppressed prices to a significant degree. Therefore, the domestic industry suffered adverse price effects by reason of subject imports. Due to the importance of price in purchase decisions and the interchangeability of domestically-produced hexamines and subject imports, the predominant underselling demonstrated above has caused injury to the domestic industry.

Petitioner's Postconference Brief at 11. The totality of its argument on adverse impact is: "As detailed in the petition, the domestic industry producing hexamine suffered significant adverse impacts by reason of the subject imports throughout the POI with respect to the indicia considered by the Commission." *Id.* at 12. To the extent Petitioner maintains a theory that domestic industry's failure to gain additional market share in the face of subject import underselling is indicative of adverse price effects and present material injury, Chair Karpel invites Petitioner to present evidence and arguments in support of that theory in any final phase of these investigations. *See, e.g., Aluminum Lithographic Printing Plates from China and Japan*, Inv. Nos. 701-TA-694 and 731-TA-1641-1642 (Final), USITC Pub. 5559 (November 2024) at 42-43.

[2] Petitioner's Postconference Br. at 12-18.

[3] Petitioner's Postconference Brief at 12-18.

interim 2024 period, there was a rapid increase in the volume of subject imports which displaced nearly all of the Russian market share. Chair Karpel finds that this rapid increase toward the end of the POI indicates the likelihood of substantially increased subject imports in the imminent future.[4] Chair Karpel also finds that the continuing and significant underselling by subject imports, including the more pronounced underselling at the end of the POI,[5] portends the capture of additional market share by subject imports in the imminent future, which would likely come at the expense of the domestic industry (as there are few nonsubject imports remaining in the market), and which would likely have a depressive and/or suppressive impact on domestic prices.

Chair Karpel notes that nonsubject imports (nearly all from Russia) have almost completely withdrawn from the U.S. market as of the interim 2024 period, and therefore does not view such imports as a potential threat to the domestic industry in the imminent future. Furthermore, she notes that notwithstanding the declines in apparent U.S. consumption, the domestic industry increased its production, shipments, and capacity over the full years of the POI and over the interim periods, while several financial indicators declined. Chair Karpel finds that the record in these preliminary phase investigations, therefore, is unclear on the degree to which declining demand has impacted the condition of the domestic industry over the period of investigation or will impact the domestic industry in the imminent future, and anticipates a more fulsome record on this issue in any final phase investigations.

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[4] Chair Karpel notes that there is limited information and data regarding subject foreign industries in this preliminary phase since the Commission only received questionnaire responses from two foreign producers (one in Saudi Arabia and one in India). CR/PR at VII-3. Based on the limited available data, subject foreign producers have some available capacity to increase production of hexamine. *See* CR/PR at Table VII-5. In addition, the United States currently accounts for a relatively minor percentage of foreign producers' total shipments (*** percent in 2023; *** percent in interim 2024), while shipments to their respective home markets and exports to third country markets accounted for the remainder (with exports to non-U.S. markets accounting for *** of shipments in 2023 and interim 2024). *Id.* These producers, therefore, can readily divert shipments from other markets to the U.S. in the imminent future. Moreover, outstanding orders by U.S. importers total *** pounds, which exceeds the total volume of subject imports in 2022 and 2023 and represents nearly *** of apparent U.S. consumption in the interim 2024 period. CR/PR at Tables VII-11 and C-1.

In addition, Chair Karpel observes that there is a large volume of subject imports held in inventory by U.S. importers as of the end of the POI. Inventories of subject imports totaled *** pounds as of June 30, 2024. This represents an increase of *** percent from the end of the interim 2023 period. CR/PR at Table C-1. Chair Karpel finds that with the more pronounced underselling evident at the end of the POI, this volume can enter the market with a depressive or suppressive impact on domestic prices and a materially injurious impact on the domestic industry in the imminent future.

[5] CR/PR at Tables V-3 to V-6.

For these reasons, Chair Karpel finds that there is a reasonable indication that the domestic industry is threatened with material injury by reason of subject imports.

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 Bakelite Synthetics (Atlanta, Georgia) on September 30, 2024, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized imports of hexamine (hexamethylenetetramine)[1] from China and India and less-than-fair-value ("LTFV") China, Germany, India, and Saudi Arabia. Table I-1 presents information relating to the background of these investigations.[2] [3]

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

Effective date	Action
September 30, 2024	Petitions filed with Commerce and the Commission; institution of the Commission investigations (89 FR 80929, October 4, 2024)
October 21, 2024	Commission's conference
October 21, 2024	Commerce's notices of initiation (89 FR 87545 and 87560, November 4, 2024)
November 13, 2024	Commission's vote
November 14, 2024	Commission's determinations
November 21, 2024	Commission's views

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

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

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

Statutory criteria

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

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

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

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

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

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

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

Organization of report

Part I of this report presents information on the subject merchandise, alleged subsidy/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 the 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.

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

Market summary

Hexamine is generally used to manufacture phenolic resins, tires, explosives, and other industrial products.[6] The petitioner, Bakelite, is the sole U.S. producer of hexamine in granular form. The petitioner indicated that there is generally only one major producer in three of the subject foreign industries (Prefere Paraform GmbH & Co. in Germany, Kanoria Chemicals & Industries Limited in India, and Methanol Chemicals Company (Chemanol) in Saudia Arabia) with several major producers of hexamine in China.[7] The leading U.S. importers of hexamine from China are ***, the leading importer of hexamine from Germany is ***, the leading importers of hexamine from India are ***, and the leading importers of hexamine from Saudi Arabia are ***. Leading importers of product from nonsubject countries include ***. U.S. purchasers of hexamine are firms that consume hexamine to manufacture downstream products, primarily plastics; leading purchasers include *** and ***.

Apparent U.S. consumption of hexamine in the total market was approximately *** pounds ($***) in 2023. Currently, the petitioner, Bakelite, is the only known source of hexamine production in the United States. Bakelite's total U.S. shipments of hexamine totaled *** pounds ($***) in 2023 and accounted for *** percent of apparent U.S. consumption of the total market by quantity (*** percent by value). Shipments of U.S. imports from subject sources totaled *** pounds ($***) in 2023 and accounted for *** percent of apparent U.S. consumption of the total market by quantity (*** percent by value). U.S. shipments of U.S. imports from nonsubject sources totaled *** pounds (approximately $***) in 2023 and accounted for *** percent of apparent U.S. consumption of the total market by quantity (*** percent by value).

[6] Petition, vol. 1, pp. 7–9.
[7] Conference transcript, p. 21 (Roderick).

Apparent U.S. consumption of hexamine in the merchant market was approximately *** pounds ($***) in 2023. Bakelite's U.S. commercial shipments of hexamine totaled *** pounds ($***) in 2023 and accounted for *** percent of apparent U.S. consumption of the merchant market by quantity (*** percent by value). U.S. shipments of U.S. imports from subject sources accounted for *** percent of apparent U.S. consumption of the merchant market by quantity (*** percent by value) in 2023. U.S. shipments of U.S. imports from nonsubject sources accounted for *** percent of apparent U.S. consumption of the merchant market by quantity (*** percent by value) in 2023.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C (table C-1 for the total market and table C-2 for the merchant market). Except as noted, U.S. industry data are based on the questionnaire response of one firm that accounted for all known U.S. production of hexamine form during 2023. U.S. imports are based on the questionnaire responses of 10 U.S. importers of hexamine and official import statistics using HTS statistical reporting number 2933.69.5000.

Previous and related investigations

Hexamine has not been the subject of any prior countervailing duty or antidumping duty investigations in the United States.

Nature and extent of alleged subsidies and sales at LTFV

Alleged subsidies

On November 4, 2024, Commerce published a notice in the Federal Register of the initiation of its countervailing duty investigations on hexamine from China and India.[8]

Alleged sales at LTFV

On November 4, 2024, Commerce published a notice in the Federal Register of the initiation of its antidumping duty investigations on hexamine from China, Germany, India, and Saudi Arabia.[9] Commerce has initiated antidumping duty investigations based on estimated dumping margins of 405.19 percent for hexamine from China, 104.72 to 111.24 percent for hexamine from Germany, 105.76 percent for hexamine from India, and 292.32 percent for hexamine from Saudi Arabia.

[8] For further information on the alleged subsidy programs see Commerce's notice of initiation and related CVD Initiation Checklist. 89 FR 87560, November 4, 2024.

[9] 89 FR 87545, November 4, 2024.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[10]

> *The scope of the investigations covers hexamine in granular form, with a particle size of 5 millimeters or less, whether stabilized or unstabilized, whether or not blended, mixed, pulverized, or grounded with other products, containing 50 percent or more hexamine by weight.*
>
> *Hexamine is the common name for hexamethylene tetramine (Chemical Abstract Service # 100-97-0), and is also referred to as 1,3,5,7-tetraazaadamantanemethenamine; HMT; HMTA; 1,3,5,7- tetraazatricyclo {3.3.1.13,7} decane; 1,3,5,7-tetraaza adamantane; hexamethylenamine. Hexamine has the chemical formula $C_6H_{12}N_4$.*
>
> *Granular hexamine that has been blended with other product(s) is included in this scope when the resulting mix contains 50 percent or more of hexamine by weight, regardless of whether it is blended with inert additives, co-reactants, or any additives that undergo self-condensation.*
>
> *Subject merchandise includes merchandise matching the above description that has been processed in a third country, including by commingling, diluting, adding or removing additives, or performing any other processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the subject country.*

[10] 89 FR 87545 and 87560, November 4, 2024.

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations are provided for in provision 2933.69.50 of the Harmonized Tariff Schedule of the United States ("HTS").[11] The 2024 general rate of duty is 6.3 percent ad valorem for HTS subheading 2933.69.50. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection. Effective September 24, 2018, hexamine originating in China was subject to an additional 10 percent ad valorem duty under section 301 of the Trade Act of 1974. Effective May 10, 2019, the section 301 duty for hexamine was increased to 25 percent.[12]

[11] USITC, HTS (2024) Basic Revision 9, Publication 5548, June 2024, pp. 29-129.

[12] 83 FR 47974, September 21, 2018; 84 FR 20459, May 9, 2019. See also HTS headings 9903.88.03 and U.S. notes 20(e)–20(g) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2024) Revision 9, USITC Publication 5548, September 2024, pp. 99-III-37. Goods exported from China to the United States prior to May 10, 2019, and entering the United States prior to June 1, 2019, were not subject to the escalated 25 percent duty (84 FR 21892, May 15, 2019).

The product

Description and applications

Hexamethylenetetramine ($C_6H_{12}N_4$, CAS number 100-97-0), commonly referred to as hexamine, is a crystalline organic compound that is a solid white powder and highly water soluble and stable at room temperature.[13] Hexamine's properties make it useful as a reactant or catalyst in a variety of applications across several different industries.

Major uses for hexamine include:[14]

- Explosives and munitions: Hexamine is nitrated with nitric acid to form Research Department Explosive, ("RDX") a stable, high detonation velocity explosive that has both military and civilian applications.
- Phenolic resins: Hexamine is both a curing agent and a catalyst promoting polymerization in producing phenolic resins. The use of hexamine enables resins to solidify and gain strength under heat, adding durability, stability, and heat-resistance to resin products. These properties are important in a variety of industrial applications, including electrical insulation, construction, and automobile manufacturing.
- Rubber and Tires:[15] Hexamine functions as an accelerator and curing agent in the vulcanization of rubber. Hexamine improves the performance of rubber products by encouraging cross-linking of rubber chains. Hexamine also gives tires additional abrasion resistance and durability.
- Energy: Hexamine fuel tablets, which are portable, easily ignitable and clean burning, are used for heating, cooking, or as emergency fuel when other energy supplies are unavailable or impractical to use.
- Biocides: Hexamine is used to inhibit the growth of bacteria and fungi in applications such as water treatment, coatings, and personal care products.
- Refractory and Friction materials: Hexamine's heat resistance and stability make it useful in high-temperature refractory materials (used in kilns, incinerators, and furnaces) and as a binder in friction materials such as brake pads and clutch facings.

[13] Petition, vol. 1, p. 3.

[14] Petition, vol. 1, pp. 7–9.

[15] Hexamine used in tire production is often of less than 95 percent concentration. Petition, vol. 1, p. 12.

- Polymers: Similar to some of its uses in rubber and tire production, hexamine serves as a crosslinker in certain polymers. Hexamine enhances the structural integrity of specialty polymers and coatings that require thermal stability and mechanical strength.
- Metal Finishing: Hexamine serves as a corrosion inhibitor for metal surfaces, protecting against oxidation and degradation during industrial usage, notably in construction, manufacturing, and automobiles.

Manufacturing processes

Hexamine is produced from a chemical reaction involving ammonia (NH_3) and formaldehyde (CH_2O or HCHO).[16] Petitioner produces its own formaldehyde via catalytic oxidation of methanol (CH_3OH or MeOH) (figure I-1), which yields gaseous formaldehyde and water ($CH_3OH + O_2 \rightarrow CH_2O + H_2O$).[17] The formaldehyde gas then goes into an absorption column where it is then condensed and absorbed into water.[18] The resulting solution has a concentration of approximately 50 percent formaldehyde.[19]

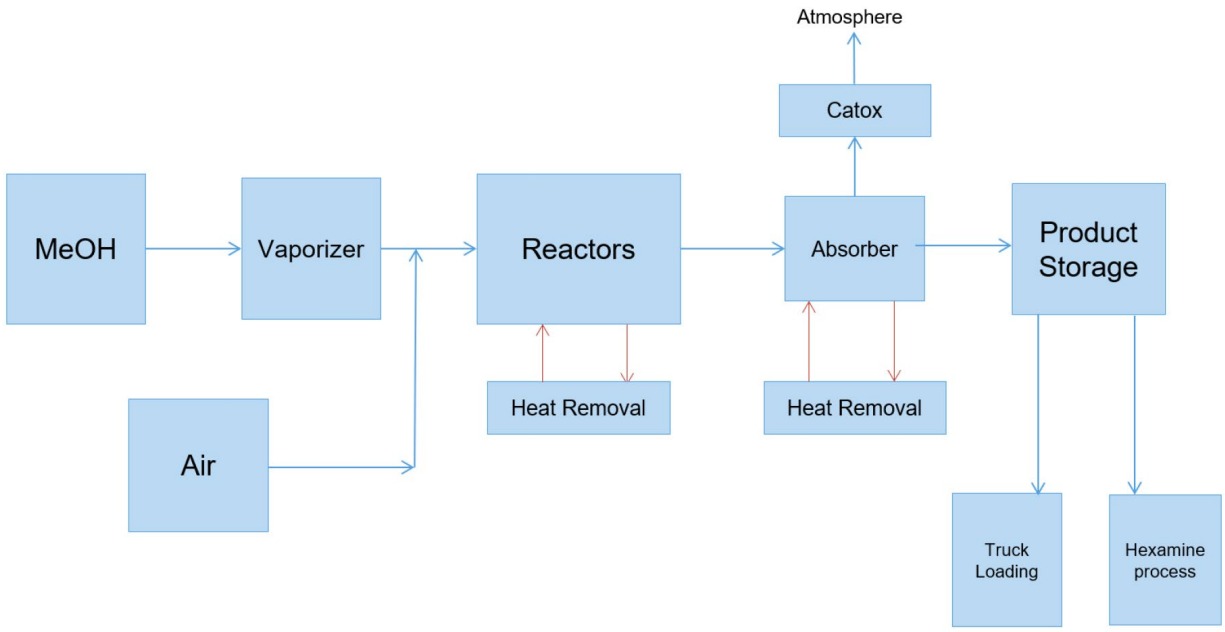
[16] Petition, vol. 1, pp. 3 to 4.

[17] The chemical reaction to produce formaldehyde uses a metal oxide catalyst (e.g., iron-molybdenum) and inside a reactor at a controlled temperature of approximately 350°C. The temperature is regulated via a thermal fluid such as oil or steam which absorbs excess heat. Conference transcript, p. 12 (Bazinet), Petition, vol. 1, pp. 4–5. An alternative method of industrial production of formaldehyde is referred to as the silver catalyst process. Gerberich, H.R., Seaman, G.C. and (2013). Formaldehyde. In Kirk-Othmer Encyclopedia of Chemical Technology, (Ed.). https://doi.org/10.1002/0471238961.0615181307051802.a01.pub3.

[18] Conference transcript, p. 13 (Bazinet).

[19] Petition, vol. 1, p. 5.

Figure I-1:
Formaldehyde production process

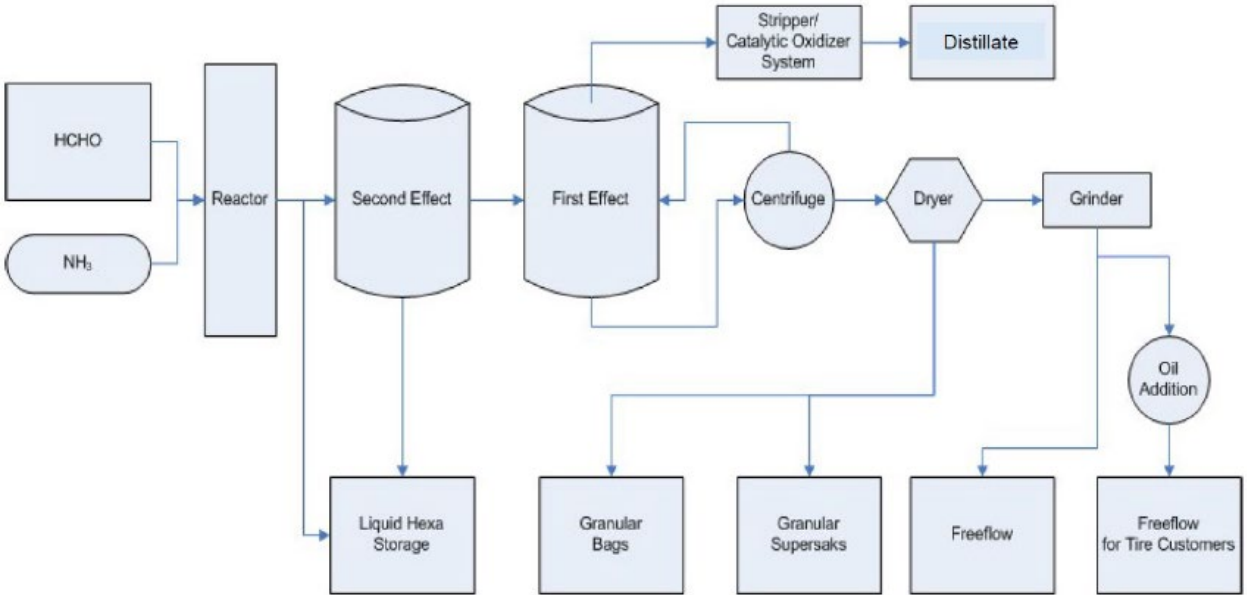


Source: Petition, vol. 1, p. 4.

As seen in figure I-2, formaldehyde (HCHO) is then mixed inside a reactor with anhydrous ammonia (NH_3) as part of the initial step to produce hexamine: $6CH_2O + 4NH_3 \rightarrow C_6H_{12}N_4 + 6H_2O$.[20] The heat of the resulting exothermic reaction must be controlled to ensure the quality of the final product.[21] The main byproduct of this reaction is water (H_2O),[22] which must be recovered and then applied to other uses or disposed of in accordance with local laws and regulations.[23] As the reaction proceeds, hexamine begins to precipitate out of the solution, creating solid crystals under controlled cooling conditions; the hexamine solution is then processed through a crystallizer unit (see Second Effect and First Effect in figure I-2) in which evaporation takes place to lower the water content.[24]

[20] Petition, vol. 1, p. 5.
[21] Petition, vol. 1, p. 5.
[22] Petition, vol. 1, p. 5.
[23] Conference transcript, p. 30 (Bazinet).
[24] Conference transcript, p. 13 (Bazinet).

Figure I-2:
Hexamine production process



Source: Petition, vol. 1, p. 5.

After the crystallization process, the resulting "slurry" mixture is sent to a centrifuge to separate the hexamine crystals from water and any other unreacted materials.[25] The extracted crystals are then sent to a dryer unit to remove any residual moisture.[26] If the moisture is properly controlled, hexamine in its solid form can have a shelf life of a year or longer.[27] In cases where a smaller particle size is required, the hexamine crystals can be ground into a fine powder.[28] Hexamine is then packaged into containers ranging from 50 pound bags to 2,000 pound supersacks.[29]

Petitioner may also further finish hexamine into several different liquid and solid products, as the petitioner produces liquid products with hexamine diluted to various concentrations.[30] The highest possible concentration of hexamine in water is 40 to 45 percent, as precipitation starts to occur above that concentration.[31] Petitioner also sells hexamine in the

[25] Conference transcript, p. 13 (Bazinet).
[26] Petition, vol. 1, p. 6.
[27] Conference transcript, p. 38 (Bazinet).
[28] Petition, vol. 1, p. 6.
[29] Petition, vol. 1, p. 6.
[30] Conference transcript, p. 39 (Roderick).
[31] Conference transcript, p. 26 (Bazinet).

following solid forms: granular hexamine (pure or high concentration), hexamine with a stabilizer to prevent clumping or improve product flow, and hexamine with additives to both improve product flow and suppress dust (resulting in a lower concentration of hexamine).[32]

Both the petitioner and the Indian respondent manufacture their own formaldehyde. Similar to the petitioner, the Indian respondent Kanoria also begins hexamine production by producing formaldehyde from methanol[33] and produces both pure granular hexamine and granular hexamine with additives for the U.S. market.[34]

Domestic like product issues

No issues with respect to domestic like product have been raised in these investigations. The petitioner argues that the record shows there is a single domestic like product, i.e., hexamine coextensive with the scope.[35] Respondent Indian producer Kanoria noted at the staff conference that, at the time, it did not have any issues with the domestic like product as proposed by the petitioner.[36] Kanoria did not raise any domestic like product issues in its postconference brief.

[32] Petition, vol. 1, pp. 11 to 12, conference transcript, pp. 32 to 33, 39 (Roderick). Additives include silica, diisodecyl phthalate, or benzoic acid.

[33] Conference transcript, pp. 56 to 57 (Ojha).

[34] Conference transcript, pp. 57 to 58 (Ojha).

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

[36] Conference transcript, p. 53 (Raghuwanshi).

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

U.S. market characteristics

Hexamine is a crystalline organic compound derived from ammonia and formaldehyde and is commonly used in products such as explosives and munitions, resins, rubber and tires, the energy sector, and other applications. Bakelite, the sole U.S. producer of granular hexamine,[1] sells hexamine to various end-users[2] and uses hexamine to manufacture and sell phenolic resins. In 2021, Russia was the largest source of U.S. imports of hexamine, however imports from Russia began to decline ahead of the Russian invasion of Ukraine and continued to decline until Russia exited the U.S. market entirely in 2023 after Russian authorities seized control of Metafrax Chemicals, the largest producer of hexamine in Russia.[3] According to Bakelite, there are several producers of hexamine in China while Germany, India, and Saudi Arabia each have one major producer.[4]

Bakelite and three of nine responding importers indicated that the market was subject to distinctive conditions of competition. *** stated that import movements have created extreme short-term pressure on pricing. According to importer ***, end-users of hexamine compete directly with Bakelite in the downstream market and as a result rely on imports to remain competitive and not have their cost structures dictated by their competition. *** also stated that hexamine usage can be unpredictable, resulting in the need for short lead times and security of supply to ensure that plants can fulfill unexpected customer orders. In addition, *** stated that in some cases end-users are limited in the amount of hexamine that they can keep in storage. Importer *** stated that sanctions have led to market shifts between suppliers and large impacts on supply. Importer *** stated that Russian hexamine has pushed prices down, while supply chain problems have resulted in shortages and high overseas freight costs.

Apparent U.S. consumption of hexamine in the total market by quantity declined during 2021 through 2023 and overall was lower during interim 2024 compared to interim 2023.

[1] Bakelite has one manufacturing facility for granular hexamine which is located in Riegelwood, North Carolina.

[2] Bakelite's two largest sales segments, the explosives and phenolic resin industries, each constitute about 25 percent of their sales, while the tire and rubber industry is their third largest segment. Conference transcript, p. 33 (Roderick).

[3] Petitioner's postconference brief, p. 8.

[4] Conference transcript, p. 21 (Roderick)

Impact of section 301 tariffs

U.S. producers and importers were asked to report the impact of section 301 tariffs on overall demand, supply, prices, or raw material costs (table II-1). According to ***, the 301 tariffs allowed for increased competition from subject countries other than China following Russia's exit from the U.S. market, while *** stated that the tariff increase was significant.

Table II-1
Hexamine: Count of firms' responses regarding impact of 301 tariffs on Chinese origin products

Count in number of firms reporting

Item	Firm type	Yes	No	Don't know
Impact on U.S. market from 301 tariffs	U.S. producers	***	***	***
Impact on U.S. market from 301 tariffs	Importers	***	***	***

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

Channels of distribution

U.S. shipments of domestically produced hexamine went primarily to other end users and petrochemical/plastic end users. U.S. shipments of imports from subject sources went exclusively to end users but differed as to which end user. U.S. shipments of imports from China went exclusively to end users in the tire/rubber and petrochemical/plastic industries. U.S. shipments of imports from Germany went primarily to tire/rubber end users and other end users in 2021, but by 2023 went primarily to other end users and petrochemical/plastic end users. U.S. shipments of imports from India, Saudi Arabia, and Russia, the largest nonsubject source, went either exclusively or almost exclusively to petrochemical/plastic end users.

Table II-2
Hexamine: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
United States	Distributors	***	***	***	***	***
United States	Tire and rubber end users	***	***	***	***	***
United States	Petrochemical and plastic users	***	***	***	***	***
United States	Other end users	***	***	***	***	***
China	Distributors	***	***	***	***	***
China	Tire and rubber end users	***	***	***	***	***
China	Petrochemical and plastic users	***	***	***	***	***
China	Other end users	***	***	***	***	***
Germany	Distributors	***	***	***	***	***
Germany	Tire and rubber end users	***	***	***	***	***
Germany	Petrochemical and plastic users	***	***	***	***	***
Germany	Other end users	***	***	***	***	***
India	Distributors	***	***	***	***	***
India	Tire and rubber end users	***	***	***	***	***
India	Petrochemical and plastic users	***	***	***	***	***
India	Other end users	***	***	***	***	***
Saudi Arabia	Distributors	***	***	***	***	***
Saudi Arabia	Tire and rubber end users	***	***	***	***	***
Saudi Arabia	Petrochemical and plastic users	***	***	***	***	***
Saudi Arabia	Other end users	***	***	***	***	***
Subject	Distributors	***	***	***	***	***
Subject	Tire and rubber end users	***	***	***	***	***
Subject	Petrochemical and plastic users	***	***	***	***	***
Subject	Other end users	***	***	***	***	***

Table continued.

Table II-2 Continued
Hexamine: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Russia	Distributors	***	***	***	***	***
Russia	Tire and rubber end users	***	***	***	***	***
Russia	Petrochemical and plastic users	***	***	***	***	***
Russia	Other end users	***	***	***	***	***
All other sources	Distributors	***	***	***	***	***
All other sources	Tire and rubber end users	***	***	***	***	***
All other sources	Petrochemical and plastic users	***	***	***	***	***
All other sources	Other end users	***	***	***	***	***
Nonsubject	Distributors	***	***	***	***	***
Nonsubject	Tire and rubber end users	***	***	***	***	***
Nonsubject	Petrochemical and plastic users	***	***	***	***	***
Nonsubject	Other end users	***	***	***	***	***
All imports	Distributors	***	***	***	***	***
All imports	Tire and rubber end users	***	***	***	***	***
All imports	Petrochemical and plastic users	***	***	***	***	***
All imports	Other end users	***	***	***	***	***

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 “---“.

Geographic distribution

Bakelite reported selling hexamine to ***, while importers reported selling to each region in the contiguous United States except for the Mountains region (table II-3). For Bakelite, *** 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-3
Hexamine: Count of U.S. producers' and U.S. importers' geographic markets

Count in number of firms reporting

Region	U.S. producers	China	Germany	India	Saudi Arabia	Subject sources
Northeast	***	1	***	2	***	5
Midwest	***	1	***	1	***	5
Southeast	***	1	***	0	***	3
Central Southwest	***	1	***	1	***	2
Mountains	***	0	***	0	***	0
Pacific Coast	***	0	***	0	***	2
Other	***	0	***	0	***	0
All regions (except Other)	***	0	***	0	***	0
Reporting firms	1	3	2	4	2	9

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-4 provides a summary of the supply factors regarding hexamine from U.S. producers and from subject countries. Bakelite and all responding foreign producers reported increasing capacity between 2021 and 2023. Both Bakelite and Kanoria, the only responding producer from India, reported shipping most of their hexamine domestically, while Chemanol, the only responding producer from Saudi Arabia, reported exporting most of its hexamine to non-U.S. markets.[5]

Table II-4
Hexamine: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in 1,000 pounds; ratios and shares in percent; count in number of firms reporting

Factor	Measure	United States	China	Germany	India	Saudi Arabia	Subject suppliers
Capacity 2021	Quantity	***	***	***	***	***	***
Capacity 2023	Quantity	***	***	***	***	***	***
Capacity utilization 2021	Ratio	***	***	***	***	***	***
Capacity utilization 2023	Ratio	***	***	***	***	***	***
Inventories to total shipments 2021	Ratio	***	***	***	***	***	***
Inventories to total shipments 2023	Ratio	***	***	***	***	***	***
Home market shipments 2023	Share	***	***	***	***	***	***
Non-US export market shipments 2023	Share	***	***	***	***	***	***
Ability to shift production	Count	***	***	***	***	***	***

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

Note: Counts equal the number of firms reporting "yes". The responding U.S. producer accounted for all U.S. production of hexamine in 2023. Responding foreign producer/exporter firms accounted for more than 75 percent of reported U.S. imports of hexamine from India and all reported U.S. imports of hexamine from Saudi Arabia in 2023. No responses were received from firms in China and Germany. 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.”

[5] According to Bakelite, Kanoria and Chemanol are the main producers in India and Saudi Arabia respectively. Conference transcript, p. 21 (Roderick).

Domestic production

Based on available information, Bakelite has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced hexamine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are Bakelite's availability of unused capacity and the ability to shift production from out-of-scope aqueous hexamine to in-scope granular hexamine. *** of the hexamine that Bakelite produced in 2023 was out-of-scope aqueous hexamine and ***.[6] Factors mitigating responsiveness of supply include limited availability of unused inventories and limited ability to shift shipments from alternate non-U.S. markets.

Subject imports from India

Based on available information, Kanoria has the ability to respond to changes in demand with small to moderate changes in the quantity of shipments of hexamine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from non-U.S. export markets and availability of unused capacity. Factors mitigating responsiveness of supply include the high level of home market shipments, low level of inventories, and inability to shift production from alternate products.

Subject imports from Saudi Arabia

Based on available information, Chemanol has the ability to respond to changes in demand with large changes in the quantity of shipments of hexamine to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from non-U.S. export markets and availability of unused capacity. Factors mitigating responsiveness of supply include limited availability of inventories and inability to shift production from alternate products.

[6] Bakelite's producer questionnaire response, sections II-3a and II-4b.

Imports from nonsubject sources

According to questionnaire data, Russia was the largest source of U.S. imports of hexamine for each year during 2021 through 2023; however, imports from Russia began to decline ahead of the Russian invasion of Ukraine and continued to decline until Russia exited the U.S. market entirely by July 2023. Russia accounted for *** nonsubject source imports in 2023, making up *** percent (*** pounds) of total reported U.S. imports in the same year.

Supply constraints

Bakelite, the sole U.S. producer, reported no supply constraints, however five of eight responding importers reported that they had experienced supply constraints since January 1, 2021. Constraints included supply chain disruptions and high freight costs due to ongoing war. In addition, importer *** noted that there have been significant spikes in demand for hexamine in Europe due to import restrictions on material from Russia and the closure of a producer in the Netherlands, resulting in less material for the U.S. market and longer lead times.

U.S. demand

Based on available information, the overall demand for hexamine is likely to experience small changes in response to changes in price. The main contributing factors are the lack of substitute products and small cost-share of hexamine in reported end-use products.

End uses and cost share

U.S. demand for hexamine depends on the demand for U.S.-produced downstream products, some of which follow general economic conditions.[7] Reported end uses include resins, plastics, tires, rubber molding compounds, cleaning products, and resin coated frack sands.[8] The reported shares of the total cost of these end-use products accounted for by hexamine ranged from *** to *** percent.

[7] Conference transcript, p. 28 (Roderick).

[8] Due to a late questionnaire response, data for importer *** have not been incorporated into the overall dataset. *** reported being an end-user of hexamine to manufacture *** and estimates that hexamine accounts for about *** percent of the cost.

Business cycles

Three of nine responding importers indicated that the market was subject to business cycles. Specifically, demand from customers fluctuates depending on sales of downstream products. U.S. producer Bakelite reported there is no seasonality for hexamine.[9]

Demand trends

U.S. producer Bakelite reported *** in U.S. demand for hexamine since January 1, 2021, while most importers reported either decreasing or no change in both U.S. and foreign demand for hexamine (table II-5).

Table II-5
Hexamine: Count of firms' responses regarding overall domestic and foreign demand, by firm type

Market	Firm type	Steadily Increase	Fluctuate Up	No change	Fluctuate Down	Steadily Decrease
Domestic demand	U.S. producers	***	***	***	***	***
Domestic demand	Importers	1	0	2	3	2
Foreign demand	U.S. producers	***	***	***	***	***
Foreign demand	Importers	0	0	2	1	1

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

Substitute products

According to U.S. producer Bakelite, there are no substitutes for hexamine across all known end-uses.[10] Similarly, no responding importers reported substitutes for hexamine.

[9] Ibid.
[10] Conference transcript, p. 29 (Roderick).

Substitutability issues

This section assesses the degree to which U.S.-produced hexamine and imports of hexamine from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of hexamine from domestic and imported sources based on those factors. Based on available data, staff believes that there is a moderate degree of substitutability between domestically produced hexamine and hexamine imported from subject sources.[11]

Factors contributing to this level of substitutability include similarities in reported quality between domestically produced hexamine and hexamine from subject sources other than China (see table II-10). Factors reducing substitutability include differences in quality between domestically produced hexamine and hexamine from China, generally higher lead times for hexamine from subject sources, and purchaser preferences for hexamine from subject sources over domestic hexamine due to competition with Bakelite in downstream sales.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations[12] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for hexamine. The major purchasing factors identified by firms include availability, pricing, security of supply, raw material costs, and lead times. In addition, two out of three responding purchasers noted Bakelite is a competitor of their downstream products, with one purchaser stating this downstream competition would likely limit them from receiving competitive pricing for U.S. produced hexamine.

[11] The degree of substitution between domestic and imported hexamine depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced hexamine to the hexamine imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as 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.).

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

Most important purchase factors

The most often cited top three factors firms consider in their purchasing decisions for hexamine were price/cost (three firms), availability/supply (three firms), and other factors (two firms) as shown in table II-6.

Table II-6
Hexamine: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Count in number of firms reporting

Factor	First	Second	Third	Total
Price / Cost	0	2	1	3
Quality	0	0	0	0
Availability / Supply	2	0	1	3
All other factors	1	1	0	2

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

Note: Other factors include downstream competition with the seller and lead times.

Lead times

Three firms, Bakelite and two importers, reported the majority, or all, of their hexamine sales as sold from inventory. Separately, four importers reported all, or nearly all, of their hexamine sales as produced-to-order. Bakelite reported that *** percent of their sales in 2023 came from inventories, with lead times averaging *** days. Collectively, *** percent of responding importers sales in 2023 were produced-to-order, with lead times averaging *** days.[13] The remaining *** percent of their sales came from inventories, with lead times averaging *** days.

[13] Responding importers' reported lead times for produced-to-order sales ranged from *** to *** days.

Comparison of U.S.-produced and imported hexamine

In order to determine whether U.S.-produced hexamine can generally be used in the same applications as imports from China, Germany, India, and Saudi Arabia, U.S. producers and importers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-7, Bakelite reported U.S. produced hexamine is *** interchangeable with hexamine from China, and *** interchangeable with hexamine produced in Germany, India, and Saudi Arabia.

Table II-7
Hexamine: Count of U.S. producers reporting interchangeability between product 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. China	***	***	***	***
United States vs. Germany	***	***	***	***
United States vs. India	***	***	***	***
United States vs. Saudi Arabia	***	***	***	***
China vs. Germany	***	***	***	***
China vs. India	***	***	***	***
China vs. Saudi Arabia	***	***	***	***
Germany vs. India	***	***	***	***
Germany vs. Saudi Arabia	***	***	***	***
India vs. Saudi Arabia	***	***	***	***
United States vs. Other	***	***	***	***
China vs. Other	***	***	***	***
Germany vs. Other	***	***	***	***
India vs. Other	***	***	***	***
Saudi Arabia vs. Other	***	***	***	***

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

As shown in table II-8, half of responding U.S. importers reported that U.S. produced hexamine is either always or frequently interchangeable with hexamine from Germany, China, India, and Saudi Arabia. *** reported that hexamine from China is frequently of lower quality and that interchangeability depends on end use application. *** also noted the importance of quality as hexamine is sometimes rejected through approval trials.

Table II-8
Hexamine: Count of U.S. importers reporting interchangeability between product 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. China	0	1	1	0
United States vs. Germany	1	1	0	0
United States vs. India	0	1	1	0
United States vs. Saudi Arabia	0	1	1	0
China vs. Germany	0	0	1	0
China vs. India	0	0	0	0
China vs. Saudi Arabia	0	0	0	0
Germany vs. India	1	0	0	0
Germany vs. Saudi Arabia	0	0	0	0
India vs. Saudi Arabia	0	0	0	0
United States vs. Other	0	0	1	0
China vs. Other	0	0	0	0
Germany vs. Other	1	0	0	0
India vs. Other	1	0	0	0
Saudi Arabia vs. Other	0	0	0	0

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

In addition, U.S. producers and importers were asked to assess how often differences other than price were significant in sales of hexamine from the United States, subject, or nonsubject countries (tables II-9 and II-10). According to Bakelite, differences other than price were never significant between U.S. produced hexamine and hexamine from Germany but were sometimes significant when compared to hexamine from China, India, and Saudi Arabia.

Table II-9
Hexamine: Count of U.S. producers reporting the significance of differences other than price between product produced in the United States and in other countries reported, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. China	***	***	***	***
United States vs. Germany	***	***	***	***
United States vs. India	***	***	***	***
United States vs. Saudi Arabia	***	***	***	***
China vs. Germany	***	***	***	***
China vs. India	***	***	***	***
China vs. Saudi Arabia	***	***	***	***
Germany vs. India	***	***	***	***
Germany vs. Saudi Arabia	***	***	***	***
India vs. Saudi Arabia	***	***	***	***
United States vs. Other	***	***	***	***
China vs. Other	***	***	***	***
Germany vs. Other	***	***	***	***
India vs. Other	***	***	***	***
Saudi Arabia vs. Other	***	***	***	***

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

Responding U.S. importers reported that differences other than price were always significant between U.S. produced hexamine and hexamine from China. At least half of all responding importers reported that there were frequently differences other than price between hexamine from the United States, Germany, India, and Saudi Arabia. One importer reported quality along with high shipping costs and duties as major factors differing hexamine from China compared to U.S. produced hexamine. Another importer reported similar factors have resulted in customers moving away from hexamine produced in China. One importer reported that supply availability and transportation are significant factors when comparing U.S. produced hexamine to hexamine from Germany, while another importer reported quality as a significant factor for the same two sources. Just-in-time deliveries were also raised as a significant factor by one importer, who reported that end users sometimes face unpredictable demand for their products but are limited in the amount of inventory they can keep on site.[14] One importer also noted competition against Bakelite for their downstream products as a significant factor.

Table II-10
Hexamine: Count of U.S. importers reporting the significance of differences between product produced in the United States and in other countries reported, by country pair

Country pair	Always	Frequently	Sometimes	Never
United States vs. China	2	0	0	0
United States vs. Germany	0	1	1	0
United States vs. India	1	1	0	0
United States vs. Saudi Arabia	0	1	1	0
China vs. Germany	0	0	1	0
China vs. India	0	0	0	0
China vs. Saudi Arabia	0	0	0	0
Germany vs. India	0	0	1	0
Germany vs. Saudi Arabia	0	0	0	0
India vs. Saudi Arabia	0	0	0	0
United States vs. Other	0	0	1	0
China vs. Other	0	0	0	0
Germany vs. Other	0	0	1	0
India vs. Other	0	0	1	0
Saudi Arabia vs. Other	0	0	0	0

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

[14] According to Bakelite, hexamine can have a shelf life of over a year, but customers sometimes have difficulties manipulating hexamine if its moisture content isn't correctly managed, resulting in the product hardening. Conference transcript, p. 38 (Bazinet).

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 subsidies and/or 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 responses of one firm that accounted for all U.S. production of hexamine during 2023.

U.S. producer

The Commission issued a U.S. producer questionnaire to two firms based on information contained in the petition. One firm provided usable data on its operations.[1] Table III-1 lists the responding U.S. producer of hexamine, its production location, position on the petition, and share of total production (in both the total and merchant markets).

Table III-1
Hexamine: U.S. producer Bakelite's, position on the petition, production location, and share of reported production, 2023

Share in percent

Firm	Position on petition	Production location	Share of production
Bakelite	Petitioner	Riegelwood, NC	100.0

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

[1] The petitioner named one other company as a potential U.S. producer of hexamine: ***. The company responded to the Commission that ***. Given that the scope language states that it covers "…hexamine in granular form… containing 50 percent or more hexamine by weight", the firm submitted a response certifying that it had not produced hexamine as defined in the scope in the United States since January 1, 2021.

Table III-2 presents information on Bakelite's ownership. Bakelite reported that ***. Additionally, it reported that ***. As shown in table III-2, Bakelite reported being ***.

Table III-2
Hexamine: U.S. producer Bakelite's ownership

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

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

Producers in the United States were asked to report any change in the character of their operations or organization relating to the production of hexamine since 2021. Table III-3 presents the changes identified by Bakelite.

Table III-3
Hexamine: U.S. producer Bakelite's reported changes in operations, since January 1, 2021

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

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 Bakelite's installed and practical capacity measures and production using the same equipment/employees. Installed or "theoretical" overall capacity measures the level of production a firm could have attained based solely on existing capital investments and not considering other constraints such as availability of material inputs, labor force, and normal downtime. The two practical capacity measures take into consideration both existing capital investment as well as non-capital investment constraints. Practical overall capacity measures firms' capacity to produce hexamine as well as any other products produced using the same equipment/machinery, whereas practical hexamine capacity measures only the practical capacity of a firm to produce hexamine based on that firms' actual product mixes over the period.

Bakelite reported its installed overall capacity was *** at *** pounds in 2021, 2022, and 2023 (and *** pounds for the interim periods). As further discussed in the following section "alternative products," Bakelite reported the production of out-of-scope aqueous hexamine using the same machinery and/or employees as used to produce in-scope hexamine over the investigation period. Bakelite's total production of the two product types using the same machinery/employees decreased irregularly *** percent from 2021 to 2023 (*** pounds in 2021, increasing to *** pounds in 2022, before decreasing to *** pounds in 2023). Total production for the two product types was *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). Resultingly, installed overall capacity utilization ratios reported by Bakelite decreased irregularly *** percentage points across the period (from *** percent in 2021, increasing to *** percent in 2022, before decreasing to *** percent in 2023). The ratio was *** percentage points higher across the interim periods (*** percent compared to *** percent).

From 2021 to 2023, Bakelite's reported practical overall capacity level for producing the two hexamine types was also *** (*** pounds for the full years and *** pounds for the interim periods). Bakelite was asked to describe any constraints limiting its ability for its practical capacity to meet its installed capacity to which Bakelite responded, "***." As noted, Bakelite's total production of the two product types using the same machinery/employees decreased irregularly *** percent from 2021 to 2023 and was *** percent higher in interim 2024 than in interim 2023. Resultingly, Bakelite's practical overall capacity utilization ratios decreased irregularly, increasing from *** percent in 2021 to *** percent in 2022 before decreasing to *** percent in 2023 (a

decrease of approximately *** percentage points across the period). The practical overall capacity utilization rate in interim 2024 was *** percentage points higher than in interim 2023 (*** percent compared to *** percent).

The practical capacity figures Bakelite reported as being allocated to in-scope hexamine production increased *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2023). The practical capacity allocated to hexamine was *** across the interim periods (approximately *** in both periods). Production of in-scope hexamine increased irregularly by *** percent from 2021 to 2023 (from *** pounds in 2021, increasing to *** pounds in 2022, before decreasing to *** pounds in 2023). Hexamine production was also *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). Resultingly, practical hexamine capacity utilization decreased irregularly approximately *** percentage points from 2021 to 2023 (from *** percent in 2021, increasing to *** percent in 2022, before decreasing to *** percent in 2023). Practical hexamine capacity utilization, however, was *** percentage points higher in interim 2024 than in interim 2023 (*** percent compared to *** percent).

Table III-4
Hexamine: U.S. producer Bakelite's installed and practical capacity, production, and utilization on the same equipment as subject production, by period

Capacity and production in 1,000 pounds; utilization in percent

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Installed overall	Capacity	***	***	***	***	***
Installed overall	Production	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***
Practical overall	Production	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***
Practical hexamine	Capacity	***	***	***	***	***
Practical hexamine	Production	***	***	***	***	***
Practical hexamine	Utilization	***	***	***	***	***

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

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

* * * * * * *

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

Alternative products

Table III-5 shows data for products produced using the same equipment and/or employees as subject production during the investigation period by Bakelite. As noted, Bakelite reported the production of out-of-scope aqueous hexamine ("OOS aqueous hexamine") using the same machinery and/or employees.[2] Hexamine that meets the scope definition accounted for between *** and *** percent of production during the period using the same equipment or employees (with out-of-scope aqueous hexamine accounting for the remaining *** to *** percent of production across the period). During 2021 to 2023, production of OOS aqueous hexamine decreased irregularly by *** percent (from *** pounds in 2021, increasing to *** pounds in 2022, before decreasing to *** pounds in 2023. Production of OOS aqueous hexamine was *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds).

Table III-5
Hexamine: U.S. producer Bakelite's overall production on the same equipment as in-scope production, by product type and period

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

Product type	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Hexamine	Quantity	***	***	***	***	***
OOS aqueous hexamine	Quantity	***	***	***	***	***
Other hexamine blends <50% weight	Quantity	***	***	***	***	***
Pharmaceutical tablets or capsules	Quantity	***	***	***	***	***
Other products	Quantity	***	***	***	***	***
Out of scope	Quantity	***	***	***	***	***
All products	Quantity	***	***	***	***	***
Hexamine	Share	***	***	***	***	***
OOS aqueous hexamine	Share	***	***	***	***	***
Other hexamine blends <50% weight	Share	***	***	***	***	***
Pharmaceutical tablets or capsules	Share	***	***	***	***	***
Other products	Share	***	***	***	***	***
Out of scope	Share	***	***	***	***	***
All products	Share	100.0	100.0	100.0	100.0	100.0

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

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

[2] ***.

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

U.S. producer's total shipments

Table III-6 presents Bakelite's U.S. shipments, export shipments, and total shipments. U.S. shipments accounted for the vast majority of Bakelite's total shipments accounting for *** percent or more of total shipments by quantity and *** percent or more of total shipments by value across the reporting periods (with export shipments representing the remaining *** percent or less by quantity and *** percent or less by value of total shipments).

U.S. shipments, by quantity, increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023). U.S. shipments by quantity were *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds). U.S. shipments, by value, increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023). U.S. shipments by value were *** percent lower in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). The unit values of U.S. shipments increased irregularly by $*** per pound from 2021 to 2023 (increasing from $*** pe pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). The unit values of U.S. shipments were $*** lower in interim 2024 than interim 2023 ($*** per pound compared to $*** per pound).

Resultingly, total shipments, by quantity, increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023). Total shipments by quantity were *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds). Total shipments, by value, increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023). Total shipments by value were *** percent lower in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). The unit values of Bakelite's total shipments increased irregularly by $*** per pound from 2021 to 2023 (increasing from $*** per pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). The unit values of Bakelite's total shipments were $*** lower in interim 2024 than interim 2023 ($*** per pound compared to $*** per pound).

Table III-6
Hexamine: U.S. producer Bakelite's total shipments, by destination and period

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

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
U.S. shipments	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
U.S. shipments	Value	***	***	***	***	***
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***
U.S. shipments	Unit value	***	***	***	***	***
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
U.S. shipments	Share of quantity	***	***	***	***	***
Export shipments	Share of quantity	***	***	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***	***	***
Export shipments	Share of value	***	***	***	***	***
Total shipments	Share of value	100.0	100.0	100.0	100.0	100.0

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

U.S. producer's U.S. shipments

Table III-7 presents Bakelite's U.S. shipments by type. Commercial U.S. shipments accounted for the majority of Bakelite's U.S. shipments representing between *** and *** percent of the company's U.S. shipments by quantity (between *** and *** percent of by value) across reporting periods. Bakelite provided the following description for the transfers, "***." In 2021, Bakelite's transfers accounted for *** percent of its U.S. shipments by both quantity and value. Internal consumption accounted for the remainder of Bakelite's U.S. shipments in each reporting period (accounting for between *** and *** percent of Bakelite's U.S. shipments of hexamine by both quantity and value). Bakelite reported that the internal consumption was ***.

Bakelite's U.S. commercial shipments by quantity increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023). U.S. commercial shipments by quantity were *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds). Bakelite's U.S. commercial shipments by value increased irregularly by *** percent from 2021 to 2023 (increasing from $*** in 2021 to $*** in 2022 before decreasing to $***). U.S. commercial shipments by quantity were *** percent higher in interim 2024 compared to interim 2023 (slightly under $***

compared to slightly over $***). The unit values of U.S. commercial shipments increased irregularly by $*** per pound from 2021 to 2023 (increasing from $*** per pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). The unit values of U.S. commercial shipments were $*** per pound lower in interim 2024 than interim 2023 ($*** per pound compared to $*** per pound).

Bakelite's internal consumption by quantity decreased by *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2022 and to *** pounds in 2023). Internal consumption by quantity was *** percent lower in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds). Bakelite's internal consumption by value decreased irregularly by *** percent from 2021 to 2023 (increasing from $*** in 2021 to $*** in 2022 before decreasing to $*** in 2023). Internal consumption by value was *** percent lower in interim 2024 compared to interim 2023 ($*** compared to $***). The unit values of internal consumption increased irregularly by $*** per pound from 2021 to 2023 (increasing from $*** per pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). The unit values of internal consumption were $*** per pound lower in interim 2024 than interim 2023 ($*** per pound compared to $*** per pound).

Resultingly, Bakelite's total U.S. shipments by quantity increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023). The total U.S. shipments by quantity were *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds). Bakelite's total U.S. shipments by value increased irregularly by *** percent from 2021 to 2023 (increasing from $*** in 2021 to $*** in 2022 before decreasing to $*** in 2023). Total U.S. shipments by value were *** percent lower in interim 2024 compared to interim 2023 ($*** compared to $***). Total U.S. shipment unit values increased irregularly by $*** per pound from 2021 to 2023 (increasing from $*** per pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). The unit values of internal consumption were $*** per pound lower in interim 2024 than interim 2023 ($*** per pound compared to $*** per pound).

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

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

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Commercial U.S. shipments	Quantity	***	***	***	***	***
Internal consumption	Quantity	***	***	***	***	***
Transfers to related firms	Quantity	***	***	***	***	***
U.S. shipments	Quantity	***	***	***	***	***
Commercial U.S. shipments	Value	***	***	***	***	***
Internal consumption	Value	***	***	***	***	***
Transfers to related firms	Value	***	***	***	***	***
U.S. shipments	Value	***	***	***	***	***
Commercial U.S. shipments	Unit value	***	***	***	***	***
Internal consumption	Unit value	***	***	***	***	***
Transfers to related firms	Unit value	***	***	***	***	***
U.S. shipments	Unit value	***	***	***	***	***
Commercial U.S. shipments	Share of quantity	***	***	***	***	***
Internal consumption	Share of quantity	***	***	***	***	***
Transfers to related firms	Share of quantity	***	***	***	***	***
U.S. shipments	Share of quantity	100.0	100.0	100.0	100.0	100.0
Commercial U.S. shipments	Share of value	***	***	***	***	***
Internal consumption	Share of value	***	***	***	***	***
Transfers to related firms	Share of value	***	***	***	***	***
U.S. shipments	Share of value	100.0	100.0	100.0	100.0	100.0

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

Captive consumption

Section 771(7)(C)(iv) of the Act states that–[3]

> *If domestic producers internally transfer significant production of the domestic like product for the production of a downstream article and sell significant production of the domestic like product in the merchant market, and the Commission finds that–*
>
> *(I) the domestic like product produced that is internally transferred for processing into that downstream article does not enter the merchant market for the domestic like product,*
>
> *(II) the domestic like product is the predominant material input in the production of that downstream article, and*
>
> *then the Commission, in determining market share and the factors affecting financial performance . . ., shall focus primarily on the merchant market for the domestic like product.*

Transfers and sales

As reported in table III-7, internal consumption accounted for between *** and *** percent of Bakelite's U.S. shipments of hexamine. Additionally, the company reported *** percent of its U.S. shipments were transfers in 2022.

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

First statutory criterion in captive consumption

The first requirement for application of the captive consumption provision is that the domestic like product that is internally transferred for processing into that downstream article not enter the merchant market for the domestic like product. Bakelite reported internal consumption of hexamine as ***. Bakelite, however, did not report diverting hexamine intended for internal consumption to the merchant market. Table III-8 shows U.S. producer Bakelite's internal consumption and transfers to related firms used in downstream products, by type of consumption and period.

Table III-8
Hexamine: U.S. producer Bakelite's production used in downstream products, by type of consumption and period

Quantity in 1,000 pounds; share in percent

Item	Measure	2021	2022	2023
Internal consumption: Sold as is	Quantity	***	***	***
Internal consumption: Processed into downstream products	Quantity	***	***	***
Internal consumption: All uses	Quantity	***	***	***
Internal consumption: Sold as is	Share	***	***	***
Internal consumption: Processed into downstream products	Share	***	***	***
Internal consumption: All uses	Share	100.0	100.0	100.0
Transfers: Sold as is	Quantity	***	***	***
Transfers: Processed into downstream products	Quantity	***	***	***
Transfers: All uses	Quantity	***	***	***
Transfers: Sold as is	Share	***	***	***
Transfers: Processed into downstream products	Share	***	***	***
Transfers: All uses	Share	***	***	***
IC + TR: Sold as is	Quantity	***	***	***
IC + TR: Processed into downstream products	Quantity	***	***	***
All internal consumption and transfers	Quantity	***	***	***
IC + TR: Sold as is	Share	***	***	***
IC + TR: Processed into downstream products	Share	***	***	***
All internal consumption and transfers	Share	100.0	100.0	***

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

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

Second statutory criterion in captive consumption

The second criterion of the captive consumption provision concerns whether the domestic like product is the predominant material input in the production of the downstream article that is captively produced. With respect to the downstream articles resulting from captive production, hexamine reportedly comprises *** percent of the finished cost and *** percent of the weight of the downstream product (***) as shown in table III-9.

Table III-9
Hexamine: U.S. producer Bakelite's contribution to downstream product

Share in percent

Material input	Share of value	Share of quantity
Hexamine	***	***
All other material inputs	***	***
All material inputs	100.0	100.0

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

U.S. producer's inventories

Table III-10 presents Bakelite's end-of-period inventories and the ratio of these inventories to its production, U.S. shipments, and total shipments. Bakelite's end-of-period inventories decreased *** percent across the 2021 to 2023 period from approximately *** pounds at the end of 2021 to approximately *** pounds at the end of 2022, and to approximately *** pounds at year-end 2023. Inventories were also *** percent lower at the end of June 2024 as compared to the end of June 2023 (*** pounds compared to *** pounds).

Resultingly, end-of-period inventories as a ratio to Bakelite's U.S. production, U.S. shipments, and total shipments all decreased from 2021 to 2023 and were all lower in the interim 2024 period as compared to the interim 2023 period. From 2021 to 2023, these ratios decreased by ***, ***, and *** percentage points, respectively. Across the interim periods, these ratios decreased by ***, ***, and *** percentage points, respectively.

Table III-10
Hexamine: U.S. producer Bakelite's inventories and their ratio to select items, by period

Quantity in 1,000 pounds; ratio in percent

Item	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
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 from subject sources

Bakelite reported that ***.

U.S. producer's purchases of imports from subject sources

Bakelite reported that ***.

U.S. employment, wages, and productivity

Table III-11 shows the U.S. producer's employment-related data. With respect to employment trends, Bakelite reported, "***."

Bakelite reported a constant number of *** production and related workers (PRWs) employed in 2021, 2022, 2023 as well as in the interim periods. The company also reported a constant of *** hours worked by those PRWs in 2021, 2022, 2023 and *** hours worked in both interim periods. Resultingly, the hours worked per PRW was constant at *** hours worked per year in per worker for 2021, 2022, and 2023 and *** hours worked per year in per worker in the interim periods. Reported wages paid decreased irregularly *** percent from $*** in 2021 increasing to $*** in 2022 before decreasing to $*** in 2023). Wages paid were *** percent higher in interim 2024 than interim 2023 ($*** compared to $***).

Hourly wages decreased irregularly $*** per hour from 2021 to 2023 (increasing from $*** per hour increasing to $*** per hour before decreasing to $*** per hour in 2023). Hourly wages were $*** per hour higher in interim 2024 than interim 2023 ($*** per hour compared to $*** per hour). Productivity per worker as measured in pounds per hour increased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds per hour in 2021 to *** pounds per hour in 2022 before decreasing to *** pounds per hour in 2023). Productivity was *** percent higher in interim 2024 than interim 2023 (*** pounds per hour compared to *** pounds per hour). Lastly, unit labor costs as measured in pounds per hour decreased by $*** per pound from 2021 to 2023 (from $*** per pound in 2021 to $*** per pound in 2023). Unit labor costs were virtually unchanged between the interim periods at $*** per pound.

Table III-11
Hexamine: U.S. producer Bakelite's employment related information, by period

Item	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Production and related workers (PRWs) (number)	***	***	***	***	***
Total hours worked	***	***	***	***	***
Hours worked per PRW (hours)	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***
Productivity (pounds per hour)	***	***	***	***	***
Unit labor costs (dollars per pounds)	***	***	***	***	***

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

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 possible importers of subject hexamine, as well as to U.S. producer of hexamine, Bakelite.[1] Usable questionnaire responses were received from ten companies.[2] These responses are estimated to represent the following shares of U.S. imports in 2023:[3]

- China: *** percent[4]
- Germany: *** percent
- India: *** percent
- Saudi Arabia: *** percent[5]
- Subject sources: *** percent
- Nonsubject sources: *** percent
- All import sources: *** percent

[1] The Commission issued questionnaires to those firms identified in the petitions; staff research; and proprietary, Census-edited Customs' import records.

[2] Additionally, four firms submitted responses certifying that their firm had not imported hexamine since January 1, 2021: *** One firm (***) also submitted a questionnaire response too late to be incorporated into the dataset. That firm reported ***.

[3] Coverage figures have been calculated by comparing quantities of U.S. imports as reported in proprietary, Census-edited Customs records under HTS statistical reporting number 2933.69.5000.

[4] ***.

[5] ***.

Table IV-1 lists all responding U.S. importers of hexamine from China, Germany, India, and Saudi Arabia and other sources, their locations, and their shares of U.S. imports, in 2023.

Table IV-1
Hexamine: U.S. importers, their headquarters, and share of imports within each source, 2023

Share in percent

Firm	Headquarters	China	Germany	India	Saudi Arabia	Subject sources
BIMEX	Brodheadsville, PA	***	***	***	***	***
Bradex	Bradford, ON	***	***	***	***	***
Continental	Fort Mill, SC	***	***	***	***	***
Cross World Sales	Cape May, NJ	***	***	***	***	***
InterAtlas	St. Catharines, ON	***	***	***	***	***
Lanxess	Pittsburgh, PA	***	***	***	***	***
Magnum	Crown Point, IN	***	***	***	***	***
Neuchem	Sparks, NV	***	***	***	***	***
Riverside	Haskell, NJ	***	***	***	***	***
Seatex	Rosenberg, TX	***	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0	100.0

Table continued.

Table IV-1 Continued
Hexamine: U.S. importers, their headquarters, and share of total imports within a given source by firm, 2023

Share in percent

Firm	Headquarters	Russia	All other sources	Nonsubject sources	All import sources
BIMEX	Brodheadsville, PA	***	***	***	***
Bradex	Bradford, ON	***	***	***	***
Continental	Fort Mill, SC	***	***	***	***
Cross World Sales	Cape May, NJ	***	***	***	***
InterAtlas	St. Catharines, ON	***	***	***	***
Lanxess	Pittsburgh, PA	***	***	***	***
Magnum	Crown Point, IN	***	***	***	***
Neuchem	Sparks, NV	***	***	***	***
Riverside	Haskell, NJ	***	***	***	***
Seatex	Rosenberg, NA	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0

Source: Compiled from data in response to Commission questionnaires.

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

Note: ***.

U.S. imports

Tables IV-2 and figure IV-1 present data for U.S. imports of hexamine from subject sources China, Germany, India, and Saudi Arabia as well as nonsubject source Russia and all other sources.[6] Table IV-3 presents corresponding percentage changes in U.S. imports, by source and period. Overall, total imports decreased by *** percent from 2021 to 2023 by quantity (from *** pounds in 2021, to *** pounds in 2022, and then to *** pounds in 2023). By value, total imports decreased by *** percent from 2021 to 2023 (decreasing from approximately $*** in 2021 and 2022 to $*** in 2023). Total imports were *** percent lower by quantity and *** percent lower by value in interim 2024 than interim 2023 (approximately *** pounds compared to *** pounds and $*** compared to $***).

Nonsubject imports represented the majority of imports by quantity and value in 2021, 2022, 2023, and interim 2023, virtually all of which were from Russia in those periods. In interim 2024, the share of imports from nonsubject sources decreased to *** percent of total imports by quantity and *** percent of total imports by value with *** imports of those being from Russia (imports from Russia were *** percent of all imports in interim 2023).[7]

---

[6] This section presents U.S. imports based on questionnaire data. As noted in footnotes 4 and 5 of this section, several firms reported imports in their questionnaire responses that were lower than what was reported for those firms in proprietary, Census-edited Customs records. Staff contacted a representative at the Census Bureau who reported that data under HTS statistical reporting number 2933.69.5000 had multiple instances of a constructed quantity being used in lieu of the firm's originally reported quantities. These distortions in the reported quantities within official U.S. import statistics occurred because certain average unit values ("AUVs") for import entries fell outside of the Census Bureau's acceptable range for import AUVs for this statistical reporting number, and the Census Bureau's process of scrubbing raw Customs records calculated alternative quantities based on a historical average range of AUVs for this product (see EDIS doc #836499). The Census Bureau acknowledged that the originally reported data had AUVs that fell just outside of their system's AUV range for this statistical reporting number and were going to issue revisions to official U.S. import statistics to revert the constructed quantities back to the originally reported quantities for entries in 2022, 2023 and 2024; as well as adjust the acceptable range for AUVs for this particular statistical reporting number so that their outlier scrubbing does not cover such large volumes of legitimate trade in hexamine in the future. Given the reported quantities in official statistics were not the actual quantities of hexamine reported by the importers, data presented in this section use the most accurate dataset available to measure U.S. imports of hexamine (i.e., USITC questionnaire responses). Additionally, please see the estimated questionnaire coverage figures on p. IV-1.

[7] During the staff conference, the petitioner testified that Russia began exiting U.S. hexamine market due to the war in Ukraine. They noted that RDX, an explosive used in artillery shells synthesized using hexamine, played a central role in this context. During the military buildup in the year before Russia invaded Ukraine, subject imports from Russia declined as Russia began domestically consuming hexamine for the production of explosives for use in the war. This process culminated in the third

(*continued*...)

Imports from nonsubject sources (virtually all of which were from Russia) decreased by *** percent from 2021 to 2023 by quantity (from *** pounds in 2021 to *** pounds in 2022 and to *** pounds in 2023). By value, imports from nonsubject sources decreased by *** percent from 2021 to 2023 (from $*** in 2021 to $*** in 2022 and to $*** in 2023). Imports from nonsubject sources were *** percent lower by quantity and *** percent lower by value in interim 2024 than interim 2023 (*** pounds compared to *** pounds and $*** compared to $***).

Imports from subject sources decreased irregularly by *** percent from 2021 to 2023 by quantity (decreasing from *** pounds in 2021 to *** pounds in 2022, and then increasing to *** pounds 2023). By value, imports from subject sources increased by *** percent from 2021 to 2023 (from approximately $*** in 2021 and 2022 and increasing to $*** million in 2023). Imports from subject sources were *** percent higher by quantity and *** percent higher by value in interim 2024 than interim 2023 (*** pounds compared to *** pounds and $*** compared to $***).

Imports from subject source China increased from *** in 2021, to *** pounds in 2022, and to *** pounds in 2023. By value, imports from China increased from $*** in 2021 to $*** in 2022 and to $*** in 2023. Imports from China were *** percent lower by quantity and *** percent lower by value in interim 2024 than interim 2023 (*** pounds compared to *** pounds and $*** compared to $***). Imports from China increased from *** percent of total imports in 2021 to *** percent of total imports in 2023 by quantity and from *** percent of the value of total imports in 2021 to *** percent of the value of imports in 2023.

Imports from subject source Germany decreased by *** percent from 2021 to 2023 by quantity (from *** pounds in 2021 to *** pounds in 2022 and to *** pounds in 2023). By value, imports from Germany decreased by *** percent from 2021 to 2023 (from $*** in 2021 to $*** in 2022 and to $*** in 2023). Imports from Germany were 36.9 percent higher by quantity and *** percent higher by value in interim 2024 than interim 2023 (*** pounds compared to *** pounds and $*** compared to $***). Imports from Germany represented between *** and *** percent of total imports by quantity and between *** and *** percent by value across the reporting periods.

quarter of 2023, when Russian authorities seized control of and nationalized Metafrax Chemicals, Russia's largest domestic producer of hexamine, and Russia exited the U.S. hexamine market entirely. Conference transcript, p. 15 (Roderick).

Imports from subject source India decreased irregularly by *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022, before decreasing to *** pounds in 2023). By value, imports from India fluctuated from $*** in 2021, increasing to $*** in 2022, before decreasing t to $*** in 2023 (for an overall decrease of *** percent across the period). Imports from India were *** pounds in interim 2024 compared to *** pounds in interim 2023 ($*** compared to $***). Imports from India represented between *** and *** percent of total imports by quantity and between *** and *** percent of imports by value across the reporting periods.

Imports from Saudi Arabia increased irregularly by *** percent from 2021 to 2023 by quantity (decreasing from *** pounds in 2021 to *** pounds in 2022 before increasing to *** pounds in 2023). By value, imports from Saudi Arabia increased irregularly by *** percent from 2021 to 2023 (decreasing from $*** in 2021 to $*** in 2022 before increasing to $*** in 2023). Imports from Saudi Arabia were *** percent higher by quantity and *** percent higher by value in interim 2024 than interim 2023 (*** pounds compared to *** pounds and $*** compared to $***). Imports from Saudi Arabia represented between *** and *** percent of total imports by quantity and between *** and *** percent by value across the reporting periods.

Average unit values of imports from China decreased from $*** per pound in 2022 to $*** per pound in 2023 (*** imports were reported from China in 2021). Average unit values of imports from India increased from $*** per pound in 2021 and 2022 to $*** per pound in 2023. Average unit values of imports from Germany decreased irregularly from 2021 to 2023 (increasing from $*** per pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). Average unit values of imports from Saudi Arabia also decreased irregularly from 2021 to 2023 (increasing from $*** per pound in 2021 to $*** per pound in 2022 before decreasing to $*** per pound in 2023). Overall, unit values of imports from subject sources were higher in 2023 than 2021 (from $*** per pound to $*** per pound). Average unit values of imports from subject sources were lower in interim 2024 than interim 2023 ($*** per pounds compared to $*** per pound).

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

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

Source	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
China	Quantity	***	***	***	***	***
Germany	Quantity	***	***	***	***	***
India	Quantity	***	***	***	***	***
Saudi Arabia	Quantity	***	***	***	***	***
Subject sources	Quantity	***	***	***	***	***
Subject sources less China	Quantity	***	***	***	***	***
Russia	Quantity	***	***	***	***	***
All other sources	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
Nonsubject sources plus China	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
China	Value	***	***	***	***	***
Germany	Value	***	***	***	***	***
India	Value	***	***	***	***	***
Saudi Arabia	Value	***	***	***	***	***
Subject sources	Value	***	***	***	***	***
Subject sources less China	Value	***	***	***	***	***
Russia	Value	***	***	***	***	***
All other sources	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
Nonsubject sources plus China	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
China	Unit value	***	***	***	***	***
Germany	Unit value	***	***	***	***	***
India	Unit value	***	***	***	***	***
Saudi Arabia	Unit value	***	***	***	***	***
Subject sources	Unit value	***	***	***	***	***
Subject sources less China	Unit value	***	***	***	***	***
Russia	Unit value	***	***	***	***	***
All other sources	Unit value	***	***	***	***	***
Nonsubject sources	Unit value	***	***	***	***	***
Nonsubject sources plus China	Unit value	***	***	***	***	***
All import sources	Unit value	***	***	***	***	***

Table continued on next page.

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

Shares and ratios in percent; ratios represent the ratio to U.S. production

Source	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
China	Share of quantity	***	***	***	***	***
Germany	Share of quantity	***	***	***	***	***
India	Share of quantity	***	***	***	***	***
Saudi Arabia	Share of quantity	***	***	***	***	***
Subject sources	Share of quantity	***	***	***	***	***
Subject sources less China	Share of quantity	***	***	***	***	***
Russia	Share of quantity	***	***	***	***	***
All other sources	Share of quantity	***	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***	***
Nonsubject sources plus China	Share of quantity	***	***	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
China	Share of value	***	***	***	***	***
Germany	Share of value	***	***	***	***	***
India	Share of value	***	***	***	***	***
Saudi Arabia	Share of value	***	***	***	***	***
Subject sources	Share of value	***	***	***	***	***
Subject sources less China	Share of value	***	***	***	***	***
Russia	Share of value	***	***	***	***	***
All other sources	Share of value	***	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***	***
Nonsubject sources plus China	Share of value	***	***	***	***	***
All import sources	Share of value	100.0	100.0	100.0	100.0	100.0
China	Ratio	***	***	***	***	***
Germany	Ratio	***	***	***	***	***
India	Ratio	***	***	***	***	***
Saudi Arabia	Ratio	***	***	***	***	***
Subject sources	Ratio	***	***	***	***	***
Subject sources less China	Ratio	***	***	***	***	***
Russia	Ratio	***	***	***	***	***
All other sources	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
Nonsubject sources plus China	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***

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 “---“.

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

* * * * * * *

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

Table IV-3
Hexamine: Changes in U.S. imports, by source and period

Percent changes (%Δ) in quantity, value and unit value in percentage points

Source	Measure	2021-23	2021-22	2022-23	Jan-Jun 2023-24
China	%Δ Quantity	▲***	▲***	▲***	▼***
Germany	%Δ Quantity	▼***	▼***	▼***	▲***
India	%Δ Quantity	▼***	▲***	▼***	▲***
Saudi Arabia	%Δ Quantity	▲***	▼***	▲***	▲***
Subject sources	%Δ Quantity	▼***	▼***	▲***	▲***
Subject sources less China	%Δ Quantity	▼***	▼***	▼***	▲***
Russia	%Δ Quantity	▼***	▼***	▼***	▼***
All other sources	%Δ Quantity	▼***	▲***	▼***	▲***
Nonsubject sources	%Δ Quantity	▼***	▼***	▼***	▼***
Nonsubject sources plus China	%Δ Quantity	▼***	▼***	▼***	▼***
All import sources	%Δ Quantity	▼***	▼***	▼***	▼***
China	%Δ Value	▲***	▲***	▲***	▼***
Germany	%Δ Value	▼***	▼***	▼***	▲***
India	%Δ Value	▼***	▲***	▼***	▲***
Saudi Arabia	%Δ Value	▲***	▼***	▲***	▲***
Subject sources	%Δ Value	▲***	▲***	▲***	▲***
Subject sources less China	%Δ Value	▼***	▲***	▼***	▲***
Russia	%Δ Value	▼***	▼***	▼***	▼***
All other sources	%Δ Value	▼***	▲***	▼***	▲***
Nonsubject sources	%Δ Value	▼***	▼***	▼***	▼***
Nonsubject sources plus China	%Δ Value	▼***	▲***	▼***	▼***
All import sources	%Δ Value	▼***	▲***	▼***	▼***
China	%Δ Unit value	▲***	▲***	▼***	▲***
Germany	%Δ Unit value	▲***	▲***	▼***	▼***
India	%Δ Unit value	▲***	▼***	▲***	▼***
Saudi Arabia	%Δ Unit value	▲***	▲***	▼***	▼***
Subject sources	%Δ Unit value	▲***	▲***	▼***	▼***
Subject sources less China	%Δ Unit value	▲***	▲***	▼***	▼***
Russia	%Δ Unit value	▲***	▲***	▼***	▼***
All other sources	%Δ Unit value	▼***	▼***	▼***	▲***
Nonsubject sources	%Δ Unit value	▲***	▲***	▼***	▲***
Nonsubject sources plus China	%Δ Unit value	▲***	▲***	▼***	▲***
All import sources	%Δ Unit value	▲***	▲***	▼***	▼***

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

Note: Percentage changes shown as "(0.0)" represent values less than zero, but greater than "(0.05)" percentage points. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[8] 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.[9]

Table IV-4 presents imports based on questionnaire data. Based on questionnaire data, U.S. imports from China accounted for *** percent total U.S. imports of hexamine by quantity in the 12-month period before the filing of the petition, below the three percent negligibility threshold. U.S. imports from Germany accounted for *** percent, U.S. imports from India accounted for *** percent, and U.S. imports from Saudi Arabia accounted for *** percent, respectively, of total U.S. imports of hexamine by quantity in the 12-month period before the filing of the petition. Those volumes are above the three percent negligibility threshold. In total, U.S. imports from subject sources accounted for *** percent of total imports of hexamine by quantity in the 12-month period before the filing of the petition.

Table IV-5 presents imports based on official import statistics.[10] Based on official import statistics, imports from all subject sources were above the three percent negligibility threshold. U.S. imports from China accounted for 4.6 percent, U.S. imports from Germany accounted for 23.2 percent, U.S. imports from India accounted for 8.1 percent, and U.S. imports from Saudi Arabia accounted for 58.0 percent, respectively, of total U.S. imports of hexamine by quantity in the 12-month period before the filing of the petition based on official import statistics. In total, U.S. imports from subject sources accounted for 93.9 percent of total imports of hexamine by quantity in the 12-month period before the filing of the petition.

[8] 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)).

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

[10] As previously noted, quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

Table IV-4
Hexamine: U.S. imports in the twelve-month period preceding the filing of the petition, September 2023 through August 2024

Quantity in 1,000 pounds; share of quantity in percent

Source of imports	Quantity	Share of quantity
China	***	***
Germany	***	***
India	***	***
Saudi Arabia	***	***
Subject sources	***	***
Russia	***	***
All other sources	***	***
Nonsubject sources	***	***
All import sources	***	***

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

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

Table IV-5
Hexamine: U.S. imports in the twelve-month period preceding the filing of the petition, September 2023 through August 2024

Quantity in 1,000 pounds; share of quantity in percent

Source of imports	Quantity	Share of quantity
China	404	4.6
Germany	2,027	23.2
India	710	8.1
Saudi Arabia	5,060	58.0
Subject sources	8,201	93.9
Russia	---	---
All other sources	529	6.1
Nonsubject sources	529	6.1
All import sources	8,730	100.0

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting number 2933.69.5000, accessed October 15, 2024. Data are based on the imports for consumption data series.

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

Note: Quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

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 as follows.

Fungibility

The Commission collected data on U.S. shipments by hexamine content level with the following breakout options: greater than 50 percent to less than 91 percent hexamine (">50 and <=91 percent"), 91 percent or greater to 95 percent hexamine (">91 and <=95 percent"), greater than 95 percent to 99 percent hexamine (">95 and <=99 percent"), and greater than 99 percent hexamine. Shipments vary by hexamine content as additives can be included in shipments depending on the customers' end-use needs for reasons such as improving particle flow, preventing agglomeration, and for dust suppression purposes.[11]

Table IV-6 and figure IV-2 present U.S. shipments by level of hexamine content/ presence of additives as reported by U.S. producer Bakelite and by U.S. importers. As shown in the table and figure, the vast majority of Bakelite's 2023 U.S. shipments were greater than 99 percent hexamine (*** percent of U.S. shipments) followed by U.S. shipments that were >95 and <=99 percent hexamine (*** percent of U.S. shipments). Bakelite also reported the remaining *** percent of its 2023 U.S. shipments were >91 and <=95 percent hexamine.

Comparatively, *** percent of U.S. shipments of hexamine from subject sources overall were greater than 99 percent hexamine followed by U.S. shipments >95 and <=99 percent hexamine (*** percent of U.S. shipments). Approximately *** percent of 2023 U.S. shipments of imports from China were greater than 99 percent hexamine with the remaining *** percent being >95 and <=99 percent hexamine. Approximately *** percent of 2023 U.S. shipments of imports from Germany were greater than 99 percent hexamine with the remaining *** percent being >95 and <=99 percent hexamine. All reported 2023 U.S. shipments of U.S. imports from India were greater than 99 percent hexamine. Approximately

[11] Conference transcript, pp. 32-33 (Roderick).

*** percent of 2023 U.S. shipments of imports from Saudi Arabia were greater than 99 percent hexamine with the remaining *** percent being >95 and <=99 percent hexamine.

Table IV-6
Hexamine: U.S. producers' and U.S. importers' U.S. shipments, by source and hexamine molecule content, 2023

Quantity in 1,000 pounds

Source	>50 and <=91 percent hexamine	>91 and <=95 percent hexamine	>95 and <=99 percent hexamine	>99 and <=100 percent hexamine	All hexamine molecule contents
U.S. producers	***	***	***	***	***
China	***	***	***	***	***
Germany	***	***	***	***	***
India	***	***	***	***	***
Saudi Arabia	***	***	***	***	***
Subject sources	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
All sources	***	***	***	***	***

Table continued.

Table IV-6 Continued
Hexamine: U.S. producers' and U.S. importers' U.S. shipments, by source and hexamine molecule content, 2023

Share across in percent

Source	>50 and <=91 percent hexamine	>91 and <=95 percent hexamine	>95 and <=99 percent hexamine	>99 and <=100 percent hexamine	All hexamine molecule contents
U.S. producers	***	***	***	***	100.0
China	***	***	***	***	100.0
Germany	***	***	***	***	100.0
India	***	***	***	***	100.0
Saudi Arabia	***	***	***	***	100.0
Subject sources	***	***	***	***	100.0
Russia	***	***	***	***	100.0
All other sources	***	***	***	***	100.0
Nonsubject sources	***	***	***	***	100.0
All import sources	***	***	***	***	100.0
All sources	***	***	***	***	100.0

Table continued.

Table IV-6 Continued
Hexamine: U.S. producers' and U.S. importers' U.S. shipments, by source and hexamine content level, 2023

Share down in percent

Source	>50 and <=91 percent hexamine	>91 and <=95 percent hexamine	>95 and <=99 percent hexamine	>99 and <=100 percent hexamine	All hexamine contents
U.S. producers	***	***	***	***	***
China	***	***	***	***	***
Germany	***	***	***	***	***
India	***	***	***	***	***
Saudi Arabia	***	***	***	***	***
Subject sources	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
All sources	100.0	100.0	100.0	100.0	100.0

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 "---".

Figure IV-2
Hexamine: U.S. producers' and U.S. importers' U.S. shipments, by source and hexamine content level, 2023

* * * * * * *

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

Geographical markets

Table IV-7 presents U.S. import quantities of hexamine as reported under HTS statistical reporting number 2933.69.5000 by source and border of entry region during 2023.[12] As discussed in part II, Bakelite reported selling hexamine to ***. In 2023, official import statistics show that approximately 65.0 percent of U.S. imports of hexamine from subject sources entered through customs entry districts in the Eastern region[13] of the United States. Almost all of the remainder of imports from subject sources entered through customs entry districts in the Northern region (34.5 percent)[14] with a small amount (0.5 percent) of imports from subject sources having entered through the Western region (all from China).[15] No imports from subject sources were reported as having entered the Southern[16] region.

All imports from Saudi Arabia and the majority (78.0 percent) of imports from China entered through the Eastern border. Comparatively, the vast majority of imports from Germany and India entered through the Northern border (96.4 and 90.6 percent, respectively). Additionally, 19.0 percent of imports of hexamine from China entered through the Northern border.

[12] Quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

[13] The eastern border of entry encompasses the following customs entry districts: Washington, DC; Savannah, Georgia; Portland, Maine; Baltimore, Maryland; Boston, Massachusetts; Charlotte, North Carolina; Buffalo and Ogdensburg, New York; Philadelphia, Pennsylvania; San Juan, Puerto Rico; Charleston, South Carolina; Norfolk, Virginia; and St. Albans, Vermont.

[14] The northern border encompasses the following customs entry districts: Chicago, Illinois; Detroit, Michigan; St. Louis, Missouri; Duluth and Minneapolis, Minnesota; Great Falls, Montana; Pembina, North Dakota; and Cleveland, Ohio.

[15] The western border encompasses the following customs entry districts: Anchorage, Alaska; Los Angeles, San Diego, and San Francisco, California; Honolulu, Hawaii; Columbia-Snake, Oregon; and Seattle, Washington.

[16] The southern border encompasses the following customs entry districts: Mobile, Alabama; New Orleans, Louisiana; Miami and Tampa, Florida; and Dallas-Fort Worth, El Paso, Houston-Galveston, and Laredo, Texas.

Table IV-7
Hexamine: U.S. imports by source and by border of entry, 2023

Quantity in 1,000 pounds

Source	East	North	South	West	All borders
China	687	168	---	27	881
Germany	64	1,721	---	---	1,785
India	4	43	---	---	47
Saudi Arabia	2,880	---	---	---	2,880
Subject sources	3,635	1,931	---	27	5,593
Russia	2,540	---	---	---	2,540
All other sources	0	---	---	---	0
Nonsubject sources	2,540	---	---	---	2,540
All import sources	6,175	1,931	---	27	8,133

Table continued.

Table IV-7 Continued
Hexamine: U.S. imports by source and by border of entry, 2023

Share in percent

Source	East	North	South	West	All borders
China	78.0	19.0	---	3.0	100.0
Germany	3.6	96.4	---	---	100.0
India	9.4	90.6	---	---	100.0
Saudi Arabia	100.0	---	---	---	100.0
Subject sources	65.0	34.5	---	0.5	100.0
Russia	100.0	---	---	---	100.0
All other sources	100.0	---	---	---	100.0
Nonsubject sources	100.0	---	---	---	100.0
All import sources	75.9	23.7	---	0.3	100.0

Table continued.

Table IV-7 Continued
Hexamine: U.S. imports by source and by border of entry, 2023

Share in percent

Source	East	North	South	West	All borders
China	11.1	8.7	---	100.0	10.8
Germany	1.0	89.1	---	---	21.9
India	0.1	2.2	---	---	0.6
Saudi Arabia	46.6	---	---	---	35.4
Subject sources	58.9	100.0	---	100.0	68.8
Russia	41.1	---	---	---	31.2
All other sources	0.0	---	---	---	0.0
Nonsubject sources	41.1	---	---	---	31.2
All import sources	100.0	100.0	---	100.0	100.0

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 2933.69.5000, accessed October 15, 2024. Imports are based on the imports for consumption data series. Quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

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

Presence in the market

Table IV-8 and figures IV-3 and IV-4 present monthly official U.S. import statistics for subject countries and nonsubject sources reported under the HTS statistical reporting number for hexamine. The monthly import statistics indicate that U.S. imports of hexamine from subject sources entered the country in 39 of the 44 months between January 2021 and August 2024 (imports from Germany entered in 37 of the 44 months, imports from Saudia Arabia entered in 16 of the 44 months, imports from India entered in 14 of the 44 months, and imports from China entered in 12 of the 44 months). Imports from nonsubject source Russia entered in 27 of the 30 months between January 2021 and June 2023 but were not present at all in the market in the months after June 2023. Imports from sources other than subject sources or Russia were present in 9 of the 44 months between January 2021 and August 2024. In total, imports of hexamine from all sources were present in 43 of the 44 months between January 2021 and August 2024.

Table IV-8
Hexamine: U.S. imports from individual subject sources, by month

Quantity in 1,000 pounds

Year	Month	China	Germany	India	Saudi Arabia
2021	January	---	119	---	---
2021	February	238	203	---	87
2021	March	---	121	---	44
2021	April	---	205	---	---
2021	May	---	161	---	---
2021	June	---	245	---	---
2021	July	---	163	---	126
2021	August	---	212	536	---
2021	September	191	82	---	---
2021	October	---	201	---	---
2021	November	---	247	---	---
2021	December	---	82	---	---
2022	January	---	---	1,290	---
2022	February	---	1,394	1,290	---
2022	March	---	281	645	---
2022	April	---	---	---	---
2022	May	---	---	---	---
2022	June	---	214	---	222
2022	July	---	725	152	---
2022	August	---	---	---	---
2022	September	---	3	---	---
2022	October	187	166	---	---
2022	November	165	178	---	---
2022	December	---	---	---	---

Table continued

Table IV-8
Hexamine: U.S. imports from individual subject sources, by month

Quantity in 1,000 pounds

Year	Month	Subject sources	Russia	All other sources	Nonsubject sources	All import sources
2021	January	119	108	---	108	227
2021	February	528	154	---	154	682
2021	March	165	551	2	553	718
2021	April	205	---	---	---	205
2021	May	161	1,204	---	1,204	1,365
2021	June	245	763	---	763	1,008
2021	July	289	44	---	44	333
2021	August	748	428	---	428	1,175
2021	September	273	1,005	44	1,049	1,322
2021	October	201	635	---	635	836
2021	November	247	366	---	366	613
2021	December	82	423	115	538	619
2022	January	1,290	44	---	44	1,334
2022	February	2,684	44	---	44	2,728
2022	March	926	132	---	132	1,058
2022	April	---	326	---	326	326
2022	May	---	44	---	44	44
2022	June	436	265	1	265	701
2022	July	877	220	---	220	1,098
2022	August	---	535	1	536	536
2022	September	3	176	---	176	179
2022	October	353	247	---	247	600
2022	November	343	573	---	573	917
2022	December	---	520	---	520	520

Table continued

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

Quantity in 1,000 pounds

Year	Month	China	Germany	India	Saudi Arabia
2023	January	---	1	---	41
2023	February	222	2	---	---
2023	March	---	143	---	148
2023	April	149	288	4	---
2023	May	223	580	1	---
2023	June	---	144	---	---
2023	July	---	143	---	---
2023	August	176	145	---	40
2023	September	84	2	---	788
2023	October	---	---	---	---
2023	November	27	134	---	1,532
2023	December	---	203	42	332
2024	January	149	207	---	195
2024	February	---	132	---	---
2024	March	---	288	42	265
2024	April	---	---	42	987
2024	May	144	187	287	286
2024	June	---	143	214	636
2024	July	---	588	42	---
2024	August	---	143	42	40

Table continued

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

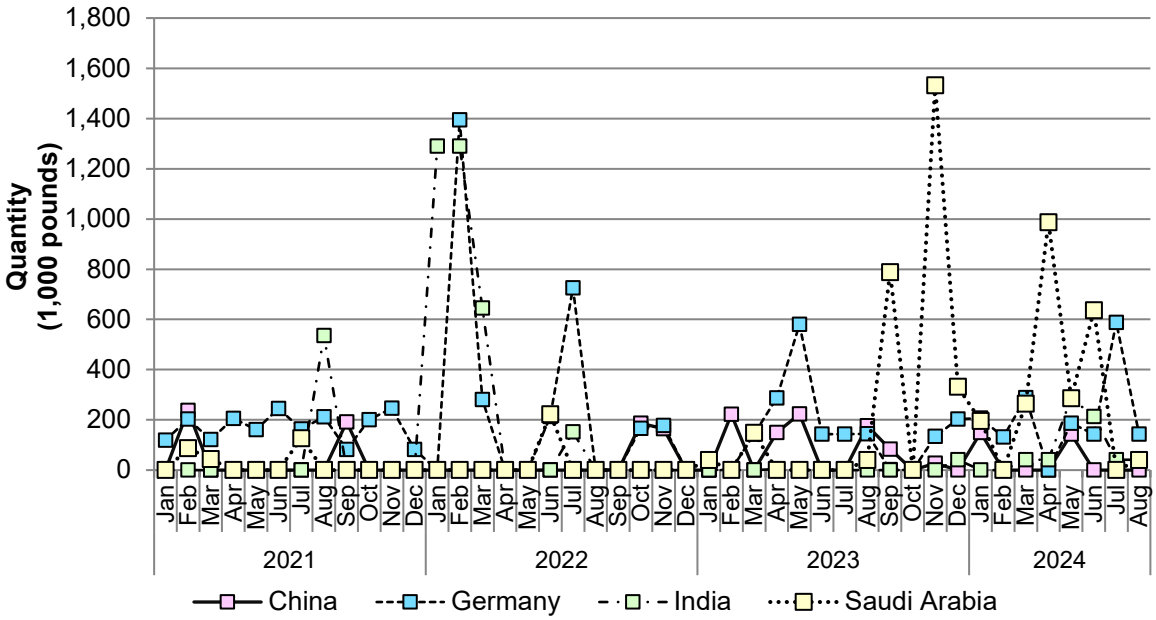
Quantity in 1,000 pounds

Year	Month	Subject sources	Russia	All other sources	Nonsubject sources	All import sources
2023	January	41	1,323	---	1,323	1,364
2023	February	224	---	---	---	224
2023	March	291	441	---	441	732
2023	April	442	---	0	0	442
2023	May	804	644	---	644	1,448
2023	June	144	132	---	132	276
2023	July	143	---	---	---	143
2023	August	360	---	---	---	360
2023	September	874	---	---	---	874
2023	October	---	---	---	---	---
2023	November	1,693	---	---	---	1,693
2023	December	576	---	---	---	576
2024	January	552	---	---	---	552
2024	February	132	---	---	---	132
2024	March	595	---	---	---	595
2024	April	1,029	---	456	456	1,485
2024	May	903	---	0	0	903
2024	June	993	---	73	73	1,066
2024	July	630	---	---	---	630
2024	August	224	---	---	---	224

Source: Compiled official U.S. imports statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting number 2933.69.5000, accessed October 15, 2024. Imports are based on the imports for consumption data series. Quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

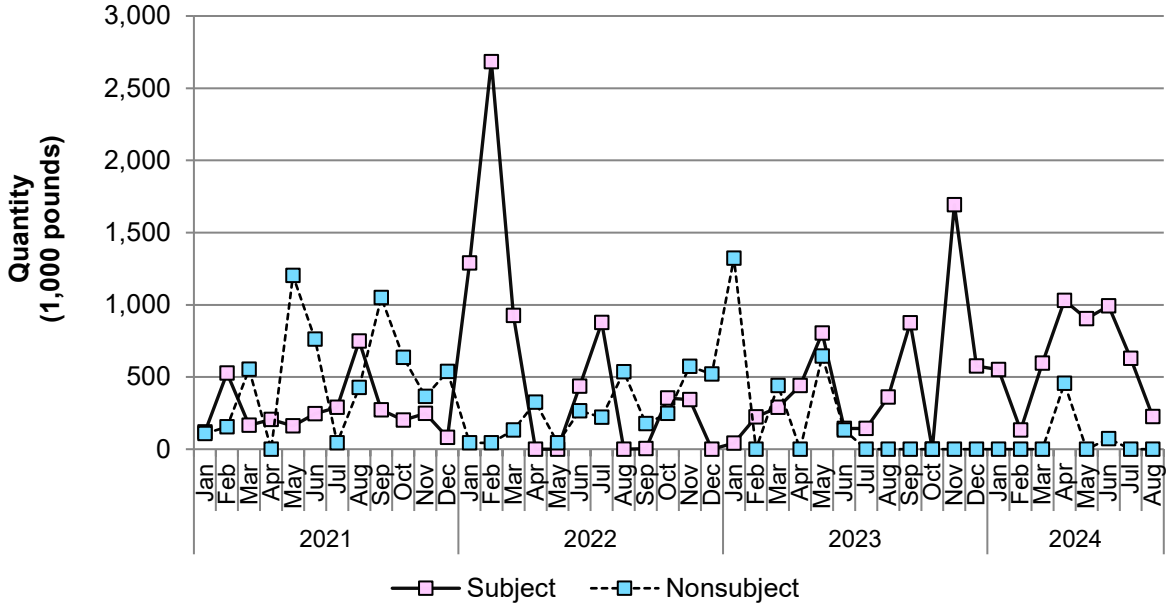
Note: Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Figure IV-3
Hexamine: U.S. imports from individual subject sources, by source and by month



Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 2933.69.5000, accessed October 15, 2024. Imports are based on the imports for consumption data series. Quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

Figure IV-4
Hexamine: U.S. imports from aggregated subject and nonsubject sources, by month



Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using statistical reporting number 2933.69.5000, accessed October 15, 2024. Imports are based on the imports for consumption data series. Imports are based on the imports for consumption data series. Quantity data for HTS statistical reporting number 2933.69.5000 for this period contains distortions. See footnote 6 in this section for additional details.

Apparent U.S. consumption and market shares

Total market apparent U.S. consumption by quantity

Table IV-9 and figure IV-5 presents data on apparent U.S. consumption and U.S. market shares by quantity for the total market for hexamine. From 2021 to 2023, total market apparent U.S. consumption, by quantity, decreased by *** percent (from *** pounds in 2021 to *** pounds in 2022 and to *** pounds in 2023). It was *** percent lower in interim 2024 than in interim 2023 (slightly greater than *** pounds compared to slightly less than *** pounds). U.S. producers' market share of the total market by quantity increased irregularly by *** percentage points from 2021 to 2023 (increasing from *** percent in 2021 to *** percent in 2022, before decreasing to *** percent in 2023). It was higher in interim 2024, at *** percent, compared to *** percent in interim 2023. The market share of subject imports decreased irregularly from *** percent in 2021 decreasing to *** percent in 2022 before increasing to *** percent in 2023. It was higher in interim 2024, at *** percent, compared to *** percent in interim 2023.

From 2021 to 2023, the share of the total market held by U.S. imports from China increased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the total market held by U.S. imports from Germany decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the total market held by U.S. imports from India decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), and the share of the total market held by U.S. imports from Saudi Arabia increased irregularly by *** percentage points (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023).

The share of the total market held by U.S. imports from Germany, India, and Saudi Arabia were higher in interim 2024 than in interim 2023 (by ***, ***and *** percentage points, respectively). The share of the total market held by U.S. imports from China was lower in interim 2024 than interim 2023 by *** percentage points.

The share of U.S. imports from nonsubject sources decreased by *** percentage points from 2021 to 2023 (from *** percent in 2021 to *** percent in 2023). It was *** percentage points lower in interim 2024 compared to interim 2023 (*** percent compared to *** percent).

Table IV-9
Hexamine: Apparent U.S. total market consumption and market shares based on quantity data, by source and period

Quantity in 1,000 pounds; shares in percent

Source	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
U.S. producers	Quantity	***	***	***	***	***
China	Quantity	***	***	***	***	***
Germany	Quantity	***	***	***	***	***
India	Quantity	***	***	***	***	***
Saudi Arabia	Quantity	***	***	***	***	***
Subject sources	Quantity	***	***	***	***	***
Subject sources less China	Quantity	***	***	***	***	***
Russia	Quantity	***	***	***	***	***
All other sources	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
Nonsubject sources plus China	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
China	Share	***	***	***	***	***
Germany	Share	***	***	***	***	***
India	Share	***	***	***	***	***
Saudi Arabia	Share	***	***	***	***	***
Subject sources	Share	***	***	***	***	***
Subject sources less China	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
Nonsubject sources plus China	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

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

Figure IV-5
Hexamine: Apparent U.S. total market consumption and market shares based on quantity data, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires

Total market apparent U.S. consumption by value

Table IV-10 and figure IV-6 present data on apparent U.S. consumption and U.S. market shares by value for hexamine for the total market. From 2021 to 2023, total market apparent U.S. consumption, by value, increased irregularly by *** percent (increasing from $*** million in 2021 to $*** in 2022, before decreasing to $*** in 2023). It was *** percent lower in interim 2024 compared to interim 2023 ($*** compared to $***). U.S. producers' market share of the total market by value increased irregularly by *** percentage points across the period (increasing from *** percent in 2021 to *** percent in 2022, before decreasing to *** percent). It was *** percentage points higher, at *** percent in interim 2024 compared to *** percent in interim 2023. The market share of subject imports decreased irregularly *** percentage points from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022 and then increasing to *** percent in 2023). It was *** percentage points higher, at *** percent in interim 2024 compared to *** percent in interim 2023.

From 2021 to 2023, the share of the value of the total market held by U.S. imports from China increased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the total market held by U.S. imports from Germany decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the value of the total market held by U.S. imports from India decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), and the share of the value of the total market held by U.S. imports from Saudi Arabia increased irregularly by *** percentage points (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023).

The share of the total market held by U.S. imports from Germany, India, and Saudi Arabia were all higher in interim 2024 than in interim 2023 (by ***, ***, and *** percentage points, respectively). The share of the total market held by U.S. imports from China was lower in interim 2024 than interim 2023 by *** percentage points.

The share of U.S. imports from nonsubject sources decreased irregularly by *** percentage points from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023). It was *** percentage points lower in interim 2024 compared to interim 2023 (from *** percent in interim 2023 to *** percent in interim 2024).

Table IV-10
Hexamine: Apparent U.S. total market consumption and market shares based on value data, by source and period

Value in 1,000 dollars; Shares in percent

Source	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
U.S. producers	Value	***	***	***	***	***
China	Value	***	***	***	***	***
Germany	Value	***	***	***	***	***
India	Value	***	***	***	***	***
Saudi Arabia	Value	***	***	***	***	***
Subject sources	Value	***	***	***	***	***
Subject sources less China	Value	***	***	***	***	***
Russia	Value	***	***	***	***	***
All other sources	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
Nonsubject sources plus China	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
All sources	Value	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
China	Share	***	***	***	***	***
Germany	Share	***	***	***	***	***
India	Share	***	***	***	***	***
Saudi Arabia	Share	***	***	***	***	***
Subject sources	Share	***	***	***	***	***
Subject sources less China	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
Nonsubject sources plus China	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

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

Figure IV-6
Hexamine: Apparent U.S. total market consumption and market shares based on value data, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires

Merchant market apparent U.S. consumption by quantity

Table IV-11 and figure IV-7 present data on apparent U.S. consumption and U.S. market shares by quantity for hexamine for the merchant market. From 2021 to 2023, merchant market apparent U.S. consumption, by quantity, decreased by *** percent (decreasing from *** pounds in 2021 to *** pounds in 2022, before increasing to *** pounds in 2023). It was *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). U.S. producers' market share of the merchant market by quantity increased irregularly from 2021 to 2023 by *** percentage points (increasing from *** percent in 2021 to *** percent in 2022 before decreasing to *** percent in 2023). It was *** percentage points higher across interim periods, at *** percent in interim 2024 compared to *** percent in interim 2023. The market share of subject imports decreased irregularly *** percentage points from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022 before increasing to *** percent in 2023). It was *** percentage points higher across interim periods, at *** percent in interim 2024 compared to *** percent in interim 2023.

From 2021 to 2023, the share of the merchant market held by U.S. imports from China increased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the merchant market held by U.S. imports from Germany decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the merchant market held by U.S. imports from India decreased by *** percentage points from 2021 to 2023 (from *** percent in 2021 to *** percent in 2023), and the share of the merchant market held by U.S. imports from Saudi Arabia increased irregularly by *** percentage points (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023).

The share of the merchant market held by U.S. imports from Germany, India, and Saudi Arabia were higher in interim 2024 than in interim 2023 (by ***, *** and *** percentage points, respectively). The share of the merchant market held by U.S. imports from China was lower in interim 2024 than interim 2023 by *** percentage points.

The share of the merchant market held by U.S. imports from nonsubject sources decreased by *** percentage points from 2021 to 2023 (from *** percent in 2021 to *** percent in 2023). It was *** percentage points lower in interim 2024 compared to interim 2023 (*** percent compared to *** percent).

Table IV-11
Hexamine: Apparent U.S. merchant market consumption and market shares based on quantity data, by source and period

Quantity in 1,000 pounds; shares in percent

Source	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
U.S. producers	Quantity	***	***	***	***	***
China	Quantity	***	***	***	***	***
Germany	Quantity	***	***	***	***	***
India	Quantity	***	***	***	***	***
Saudi Arabia	Quantity	***	***	***	***	***
Subject sources	Quantity	***	***	***	***	***
Subject sources less China	Quantity	***	***	***	***	***
Russia	Quantity	***	***	***	***	***
All other sources	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
Nonsubject sources plus China	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
China	Share	***	***	***	***	***
Germany	Share	***	***	***	***	***
India	Share	***	***	***	***	***
Saudi Arabia	Share	***	***	***	***	***
Subject sources	Share	***	***	***	***	***
Subject sources less China	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
Nonsubject sources plus China	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

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

Figure IV-7
Hexamine: Apparent U.S. merchant market consumption and market shares based on quantity data, by source and period

* * * * * * *

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

Merchant market apparent U.S. consumption by value

Table IV-12 and figure IV-8 present data on apparent U.S. consumption and U.S. market shares by value for hexamine for the merchant market. From 2021 to 2023, merchant market apparent U.S. consumption, by value, increased irregularly by *** percent (increasing from $*** million in 2021 to $*** in 2022, before decreasing to $*** in 2023). It was *** percent lower in interim 2024 compared to interim 2023 ($*** compared to $***). U.S. producers' market share of the merchant market by value increased from *** percent in 2021 to *** percent in 2022 before decreasing to *** percent in 2023, an increase of *** percentage points across the period. It was *** percentage points higher, at *** percent in interim 2024 compared to *** percent in interim 2023. The market share of subject imports decreased irregularly *** percentage points from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent to 2023). It was *** percentage points higher, at *** percent in interim 2024 compared to *** percent in interim 2023.

From 2021 to 2023, the share of the merchant market held by U.S. imports from China increased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the merchant market held by U.S. imports from Germany decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), the share of the merchant market held by U.S. imports from India decreased by *** percentage points (from *** percent in 2021 to *** percent in 2023), and the share of the merchant market held by U.S. imports from Saudi Arabia increased irregularly by *** percentage points from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023).

The share of the merchant market held by U.S. imports from Germany, India, and Saudi Arabia were all higher in interim 2024 than in interim 2023 (by ***, ***, and *** percentage points, respectively). The share of the merchant market held by U.S. imports from China was lower in interim 2024 than interim 2023 by *** percentage points (*** percent compared to *** percent).

The share of U.S. imports from nonsubject sources decreased irregularly by *** percentage points from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023). It was *** percentage points lower in interim 2024 compared to interim 2023 (*** percent in interim 2023 compared to *** percent in interim 2024).

Table IV-12
Hexamine: Apparent U.S. merchant market consumption and market shares based on value data, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
U.S. producers	Value	***	***	***	***	***
China	Value	***	***	***	***	***
Germany	Value	***	***	***	***	***
India	Value	***	***	***	***	***
Saudi Arabia	Value	***	***	***	***	***
Subject sources	Value	***	***	***	***	***
Subject sources less China	Value	***	***	***	***	***
Russia	Value	***	***	***	***	***
All other sources	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
Nonsubject sources plus China	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
All sources	Value	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
China	Share	***	***	***	***	***
Germany	Share	***	***	***	***	***
India	Share	***	***	***	***	***
Saudi Arabia	Share	***	***	***	***	***
Subject sources	Share	***	***	***	***	***
Subject sources less China	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
Nonsubject sources plus China	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

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

Figure IV-8
Hexamine: Apparent U.S. merchant market consumption and market shares based on value data, by source and period

* * * * * * *

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

Part V: Pricing data

Factors affecting prices

Raw material costs

Hexamine is produced from a mixture of ammonia and formaldehyde.[1] U.S. producer Bakelite reported that formaldehyde accounted for *** percent and that ammonia comprised *** percent of the value of its raw material costs in 2023.[2] Bakelite produced its own formaldehyde, but purchased ammonia. Prices for ammonia increased by 300 percent in 2021 before decreasing by 9.6 percent in 2022 and by 35.7 percent in 2023. Bakelite reported that the cost of hexamine closely follows the cost of raw materials.[3]

Figure V-1
Raw materials: Ammonia average monthly prices reported by month, January 2021 through October 2024

* * * * * * *

Source: *** accessed October 21, 2024.

[1] Conference transcript, pg. 9 (Roderick)
[2] *** producer questionnaire response, section III-9c.
[3] Conference transcript, pg. 28 (Roderick).

Table V-1
Raw Materials: Average monthly prices of Ammonia, January 2021 through October 2024

Raw material price in dollars per pound; n.a. = not available

Month	2021	2022	2023	2024
January	***	***	***	***
February	***	***	***	***
March	***	***	***	***
April	***	***	***	***
May	***	***	***	***
June	***	***	***	***
July	***	***	***	***
August	***	***	***	***
September	***	***	***	***
October	***	***	***	***
November	***	***	***	***
December	***	***	***	***

Source: *** accessed October 21, 2024.

Transportation costs to the U.S. market

Transportation costs for hexamine shipped from subject countries to the United States averaged 15.0 percent for China, 18.7 percent for Germany, 14.1 percent for India, and 9.5 percent for Saudi Arabia during 2023. These estimates were derived from official import data and represent the transportation and other charges on imports.[4]

U.S. inland transportation costs

Bakelite and eight responding importers reported that ***. Bakelite reported that its U.S. inland transportation costs accounted for about *** percent of the cost of U.S.-produced hexamine, while most importers reported cost shares of *** to *** percent for hexamine imported from subject sources.[5]

[4] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2023 and then dividing by the customs value based on the HTS statistical reporting number 2933.69.5000.

[5] One importer, ***, reported a cost share of *** percent.

Pricing practices

Pricing methods

Bakelite reported setting prices using ***, while importers reported using transaction-by-transaction negotiations and other methods (table V-2). [6]

Table V-2
Hexamine: Count of U.S. producer's and importers' reported price setting methods

Count in number of firms reporting

Method	U.S. producers	U.S. importers
Transaction-by-transaction	***	7
Contract	***	0
Set price list	***	0
Other	***	2
Responding firms	1	8

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] Other methods reported were *** and ***.

Hexamine is sold on both a spot basis and on a long-term contract basis (table V-3). In 2023, *** reported selling *** of its hexamine on the spot market and the remainder through long-term contracts. The average duration for a long-term contract was *** days and typically ***.[7]

Table V-3
Hexamine: U.S. producer's and importers' shares of commercial U.S. shipments by type of sale, 2023

Share in percent

Sale type	U.S. producers	Subject U.S. importers
Long-term contracts	***	***
Annual contract	***	***
Short-term contracts	***	***
Spot sales	***	***
All sales types	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

*** and *** of eight responding importers reported they typically quote prices on a *** basis. *** reported offering an annual total volume discount while *** reported offering discounts on an ad hoc basis to maintain supply chains. The remaining importers reported no discount policies.

[7] ***

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following hexamine products shipped to unrelated U.S. customers during January 2021 through June 2024.

Product 1.-- "Unstabilized" hexamine, with a hexamine content above 99% by weight.

Product 2.-- "Stabilized" hexamine, with a hexamine content above 95% but less than or equal to 99% by weight.

Product 3.-- "Stabilized" hexamine, with a hexamine content equal to or below 95% by weight.

One U.S. producer 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.[8] Pricing data reported by these firms accounted for 100.0 percent of U.S. producer's U.S. shipments of hexamine, *** percent of U.S. shipments of subject imports from China, *** percent of U.S. shipments of subject imports from Germany, *** percent of U.S. shipments of subject imports from India, and *** percent of U.S. shipments of subject imports from Saudi Arabia in 2023.[9]

Price data for products 1-3 are presented in tables V-4 to V-6 and figures V-2 to V-4.[10]

[8] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[9] Pricing coverage is based on U.S. shipments reported in questionnaires.

[10] Importers ***, ***, and *** each had only single instances of importing subject merchandise. Price data for *** and *** have been removed by staff due to being anomalously high or low. *** confirmed its imports were sold at a large discount to clear inventory of a discontinued product.

Table V-4
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	Germany price	Germany quantity	Germany margin
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***

Table continued.

Table V-4 Continued
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	India price	India quantity	India margin	Saudi Arabia price	Saudi Arabia quantity	Saudi Arabia margin
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***

Table continued.

Table V-4 Continued
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	Subject price	Subject quantity	Subject margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***

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

Note: Product 1: “Unstabilized” hexamine, with a hexamine content above 99% by weight.

Figure V-2
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by source and quarter

Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

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

Note: Product 1: “Unstabilized” hexamine, with a hexamine content above 99% by weight.

Table V-5
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	Germany price	Germany quantity	Germany margin
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***

Table continued.

Table V-5 Continued
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	India price	India quantity	India margin	Saudi Arabia price	Saudi Arabia quantity	Saudi Arabia margin
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***

Table continued.

Table V-5 Continued
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	Subject price	Subject quantity	Subject margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***

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

Note: Product 2: “Stabilized” hexamine, with a hexamine content above 95% but less than or equal to 99% by weight.

Figure V-3
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, by source and quarter

Price of product 2

* * * * * * *

Volume of product 2

* * * * * * *

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

Note: Product 2: “Stabilized” hexamine, with a hexamine content above 95% but less than or equal to 99% by weight.

Table V-6
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	Germany price	Germany quantity	Germany margin
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***

Table continued.

Table V-6 Continued
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	India price	India quantity	India margin	Saudi Arabia price	Saudi Arabia quantity	Saudi Arabia margin
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***

Table continued.

Table V-6 Continued
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Quantity in pounds; Prices in dollars per pound; Margins in percent

Period	U.S. price	U.S. quantity	Subject price	Subject quantity	Subject margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***

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

Note: Product 3: “Stabilized” hexamine, with a hexamine content equal to or below 95% by weight.

Figure V-4
Hexamine: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, by source and quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

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

Note: Product 3: “Stabilized” hexamine, with a hexamine content equal to or below 95% by weight.

Price trends

Table V-7 summarizes price trends by country and product. As shown in the table, prices were generally higher at the end of the period (Q2 2024) than they were at the beginning of the period (Q1 2021). Domestic price increases ranged from *** to *** while import price increases ranged from *** to *** percent.

Table V-7
Hexamine: Summary of price data, by product and source, January 2021 through June 2024

Prices in dollars per pound; Quantity in pounds; Change in percent

Product	Source	Number of quarters	Quantity	Low price	High price	First quarter price	Last quarter price	Quarterly change (percent)	Change over period
Product 1	United States	***	***	***	***	***	***	***	***
Product 1	China	***	***	***	***	***	***	***	***
Product 1	Germany	***	***	***	***	***	***	***	***
Product 1	India	***	***	***	***	***	***	***	***
Product 1	Saudi Arabia	***	***	***	***	***	***	***	***
Product 2	United States	***	***	***	***	***	***	***	***
Product 2	China	***	***	***	***	***	***	***	***
Product 2	Germany	***	***	***	***	***	***	***	***
Product 2	India	***	***	***	***	***	***	---	***
Product 2	Saudi Arabia	***	***	***	***	***	***	***	***
Product 3	United States	***	***	***	***	***	***	***	***
Product 3	China	***	***	***	***	***	***	---	***
Product 3	Germany	***	***	***	***	***	***	***	***
Product 3	India	***	***	***	***	***	***	---	***
Product 3	Saudi Arabia	***	***	***	***	***	***	---	***

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

Note: Change over period column is percentage change from the first quarter 2021 to the last quarter in 2024.

Table V-8
Hexamine: Indexed U.S. producer prices, by quarter

Period	Product 1	Product 2	Product 3
2021 Q1	100.0	100.0	100.0
2021 Q2	***	***	***
2021 Q3	***	***	***
2021 Q4	***	***	***
2022 Q1	***	***	***
2022 Q2	***	***	***
2022 Q3	***	***	***
2022 Q4	***	***	***
2023 Q1	***	***	***
2023 Q2	***	***	***
2023 Q3	***	***	***
2023 Q4	***	***	***
2024 Q1	***	***	***
2024 Q2	***	***	***

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

Figure V-5
Hexamine: Indexed U.S. producer prices, by quarter

* * * * * * *

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

Table V-9
Hexamine: Indexed subject U.S. importer prices, by quarter

Period	Product 1	Product 2	Product 3
2021 Q1	100.0	100.0	---
2021 Q2	***	***	***
2021 Q3	***	***	***
2021 Q4	***	***	***
2022 Q1	***	***	***
2022 Q2	***	***	***
2022 Q3	***	***	***
2022 Q4	***	***	***
2023 Q1	***	***	***
2023 Q2	***	***	***
2023 Q3	***	***	***
2023 Q4	***	***	***
2024 Q1	***	***	***
2024 Q2	***	***	***

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

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

Figure V-6
Hexamine: Indexed subject U.S. importer prices, by quarter

* * * * * * *

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

Price comparisons

As shown in tables V-10 to V-12, prices for product imported from subject countries were below those for U.S.-produced product in 34 of 52 instances (*** pounds); margins of underselling ranged from *** to *** percent. In the remaining 18 instances (*** pounds), prices for product from subject countries were between *** and *** percent above prices for the domestic product.

Table V-10
Hexamine: Instances of underselling and overselling and the range and average of margins, by product

Quantity in pounds; Margins in percent

Products	Type	Number of instances	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	21	***	***	***	***
Product 2	Underselling	13	***	***	***	***
Product 3	Underselling	---	***	***	***	***
All products	Underselling	34	***	***	***	***
Product 1	Overselling	4	***	***	***	***
Product 2	Overselling	12	***	***	***	***
Product 3	Overselling	2	***	***	***	***
All products	Overselling	18	***	***	***	***

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

Quantity in pounds; Margins in percent

Sources	Type	Number of instances	Quantity	Average margin	Min margin	Max margin
China	Underselling	3	***	***	***	***
Germany	Underselling	22	***	***	***	***
India	Underselling	3	***	***	***	***
Saudia Arabia	Underselling	6	***	***	***	***
All subject sources	Underselling	34	***	***	***	***
China	Overselling	7	***	***	***	***
Germany	Overselling	5	***	***	***	***
India	Overselling	1	***	***	***	***
Saudia Arabia	Overselling	5	***	***	***	***
All subject sources	Overselling	18	***	***	***	***

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
Hexamine: Instances of underselling and overselling and the range and average of margins, by year

Quantity in pounds; Margins in percent

Period	Type	Number of instances	Quantity	Average margin	Min margin	Max margin
2021	Underselling	8	***	***	***	***
2022	Underselling	8	***	***	***	***
2023	Underselling	9	***	***	***	***
January through June 2024	Underselling	9	***	***	***	***
All periods	Underselling	34	***	***	***	***
2021	Overselling	1	***	***	***	***
2022	Overselling	2	***	***	***	***
2023	Overselling	11	***	***	***	***
January through June 2024	Overselling	4	***	***	***	***
All periods	Overselling	18	***	***	***	***

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

The Commission requested that U.S. producers of hexamine report purchasers with which they experienced instances of lost sales or revenue due to competition from imports of hexamine from China, Germany, India, and Saudi Arabia during January 2021 through June 2024. Bakelite, the sole U.S. producer, reported instances of lost sales and also instances of needing to reduce prices or roll back announced price increases. In its lost sales and lost revenue allegations, Bakelite identified *** firms with which they lost sales or revenue (*** consisting of lost sales allegations, *** consisting of lost revenue allegations, and *** consisting of both types of allegations).Three of the allegations were with respect to ***, a non-subject source, one with respect to ***,[11] one with respect to ***, one with respect to ***, and one with respect to ***.

Staff contacted all *** purchasers named in the allegations and received responses from three purchasers.[12] Responding purchasers reported purchasing *** pounds of hexamine during January 2021 through June 2024 (table V-13).

During 2023, responding purchasers purchased 1.7 percent from U.S. producers, 18.3 percent from China, Germany, India, and Saudi Arabia, and the remaining 80 percent from non-subject countries, ***. Purchasers were asked about changes in their purchasing patterns from different sources since 2021. Of the responding purchasers, one reported no change and two reported fluctuating purchases of domestically produced hexamine. *** and ***, the two largest purchasers, made the majority of their purchases of domestically produced hexamine in 2022. According to ***, the uptick in domestic purchases in 2022 was driven by ocean freight supply chain disruptions. Purchasers of subject imports reported mixed responses regarding their purchasing trends, however they generally reported an increase in purchases of subject imports except for ***. *** noted it was beginning or building relationships with suppliers in Germany, India, and Saudi Arabia, while *** noted its purchases from Saudi Arabia are fluctuating up due to a lack of material from Russia. *** and *** both described their purchases of Russian hexamine as fluctuating down, with *** specifying the conflict in Ukraine as an explanation.

[11] The allegation with respect to purchaser *** noted both *** and *** as the country of origin for the imported product.

[12] A fourth firm, ***, submitted a U.S. importer questionnaire but did not submit a lost sales and lost revenue survey.

Table V-13
Hexamine: U.S. purchasers' reported purchases and imports, by firm and source

Quantity in pounds, Change in shares in percentage points

Firm	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject share
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	***	***	***	***	***

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

Note: All other includes all other sources and unknown sources. Change is the percentage point change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

Of the 3 responding purchasers, *** reported that, since 2021, they had purchased imported hexamine from China, India, and Saudi Arabia instead of U.S.-produced product. That purchaser reported that subject import prices were lower than U.S.-produced product, and none of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. *** identified the U.S producer being a direct competitor as non-price reasons for purchasing imported rather than U.S.-produced product.

Table V-14
Hexamine: U.S. purchasers' responses to purchasing subject imports instead of domestic product, by firm

Count in number of firms reporting

Firm	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Narrative on reasons for purchasing imports
***	***	***	***	***
***	***	***	***	***
***	***	***	***	***
All firms	Yes--1; No--2	Yes--1; No--0	Yes--0; No--1	NA

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

Table V-15
Hexamine: U.S. purchasers' responses to purchasing subject imports instead of domestic product, by source

Count in number of firms reporting; Quantity in 1,000 pounds

Source	Count of purchasers reporting subject instead of domestic	Count of purchasers reported that imports were priced lower	Count of purchasers reporting that price was a primary reason for shift	Quantity
China	1	1	---	***
Germany	---	---	---	***
India	---	---	---	***
Saudi Arabia	1	1	---	***
Subject sources	1	1	---	***

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

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

Count in number of firms reporting; Price reductions in percent

Firm	Producers lowered prices	Price reduction	Narrative on producer price reductions
***	***	***	***
***	***	***	***
***	***	***	***
All firms	Yes--0; No--2	***	NA

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

Part VI: Financial experience of U.S. producers

Background[1]

The petitioner, Bakelite, is the sole U.S. producer of hexamine. Bakelite reported financial data for a fiscal year ending December 31st and on the basis of GAAP.[2]

The industry's net sales are composed of commercial sales, internal consumption, and transfers to related firms. During the period examined, January 1, 2021, through June 30, 2024, commercial sales represented *** percent of total net sales quantity, internal consumption represented *** percent, and transfers to related firms represented the remaining *** percent.[3] [4]

Figure VI-1 presents Bakelite's share of sales quantity in 2023.

[1] The following abbreviations are used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), fiscal year ("FY"), net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development expenses ("R&D expenses"), and return on assets ("ROA").

[2] The trade and financial sections reconciled. ***. Email from ***, October 30, 2024; Bakelite, "Bakelite Synthetics Announces Agreement to Acquire LRBG Chemicals, Inc." August 28, 2023, https://bakelite.com/bakelite-synthetics-announces-agreement-to-acquire-lrbg-chemicals-inc/; LRBG Chemicals, "About Us: Our History," accessed November 3, 2024, https://lrbgchemicals.com/our-history/; Bakelite, "Bakelite Synthetics Completes Acquisition of Georgia-Pacific Chemicals," May 27, 2022, https://bakelite.com/acquisition-of-georgia-pacific-chemicals/.

[3] Transfers to related firms ***. Bakelite submission to the USITC, October 29, 2024; U.S. producer questionnaire response, section II-13.

[4] ***. Bakelite submission to the USITC, October 29, 2024.

Figure VI-1
Hexamine: U.S. producer Bakelite's share of sales quantity in 2023, by type

* * * * * * *

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

Operations on hexamine

Table VI-1 presents data on the U.S. producer's total operations in relation to hexamine, while table VI-2 presents corresponding changes in AUVs. Financial results for the merchant market are presented in table VI-3, and table VI-4 presents the corresponding changes in AUVs for the merchant market.

Table VI-1
Hexamine: U.S. producer Bakelite's results of total market operations, by item and period

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

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Commercial sales	Quantity	***	***	***	***	***
Internal consumption	Quantity	***	***	***	***	***
Transfers to related firms	Quantity	***	***	***	***	***
Total net sales	Quantity	***	***	***	***	***
Commercial sales	Value	***	***	***	***	***
Internal consumption	Value	***	***	***	***	***
Transfers to related firms	Value	***	***	***	***	***
Total net sales	Value	***	***	***	***	***
COGS: Raw materials	Value	***	***	***	***	***
COGS: Direct labor	Value	***	***	***	***	***
COGS: Other factory	Value	***	***	***	***	***
COGS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Interest expense	Value	***	***	***	***	***
All other expenses	Value	***	***	***	***	***
All other income	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***	***	***
COGS: Other factory	Ratio to NS	***	***	***	***	***
COGS: Total	Ratio to NS	***	***	***	***	***
Gross profit	Ratio to NS	***	***	***	***	***
SG&A expense	Ratio to NS	***	***	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***	***	***
Net income or (loss)	Ratio to NS	***	***	***	***	***

Table continued.

Table VI-1 Continued
Hexamine: U.S. producer Bakelite's results of total market operations, by item and period

Shares in percent; unit values in dollars per pound; count in number of firms reporting

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
COGS: Raw materials	Share of COGS	***	***	***	***	***
COGS: Direct labor	Share of COGS	***	***	***	***	***
COGS: Other factory	Share of COGS	***	***	***	***	***
COGS: Total	Share of COGS	***	***	***	***	***
Commercial sales	Unit value	***	***	***	***	***
Internal consumption	Unit value	***	***	***	***	***
Transfers to related firms	Unit value	***	***	***	***	***
Total net sales	Unit value	***	***	***	***	***
COGS: Raw materials	Unit value	***	***	***	***	***
COGS: Direct labor	Unit value	***	***	***	***	***
COGS: Other factory	Unit value	***	***	***	***	***
COGS: Total	Unit value	***	***	***	***	***
Gross profit or (loss)	Unit value	***	***	***	***	***
SG&A expenses	Unit value	***	***	***	***	***
Operating income or (loss)	Unit value	***	***	***	***	***
Net income or (loss)	Unit value	***	***	***	***	***
Operating losses	Count	***	***	***	***	***
Net losses	Count	***	***	***	***	***
Data	Count	1	1	1	1	1

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

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

Table VI-2
Hexamine: Changes in AUVs between comparison periods for the total market

Changes in percent

Item	2021-23	2021-22	2022-23	Jan-Jun 2023-24
Commercial sales	***	***	***	***
Internal consumption	***	***	***	***
Transfers to related firms	***	***	***	***
Total net sales	***	***	***	***
COGS: Raw materials	***	***	***	***
COGS: Direct labor	***	***	***	***
COGS: Other factory	***	***	***	***
COGS: Total	***	***	***	***

Table continued.

Table VI-2 Continued
Hexamine: Changes in AUVs between comparison periods for the total market

Changes in dollars per pound

Item	2021-23	2021-22	2022-23	Jan-Jun 2023-24
Commercial sales	***	***	***	***
Internal consumption	***	***	***	***
Transfers to related firms	***	***	***	***
Total net sales	***	***	***	***
COGS: Raw materials	***	***	***	***
COGS: Direct labor	***	***	***	***
COGS: Other factory	***	***	***	***
COGS: Total	***	***	***	***
Gross profit or (loss)	***	***	***	***
SG&A expense	***	***	***	***
Operating income or (loss)	***	***	***	***
Net income or (loss)	***	***	***	***

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

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Table VI-3
Hexamine: U.S. producer Bakelite's results of merchant market operations, by item and period

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

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Merchant market sales	Quantity	***	***	***	***	***
Merchant market sales	Value	***	***	***	***	***
COGS: Raw materials	Value	***	***	***	***	***
COGS: Direct labor	Value	***	***	***	***	***
COGS: Other factory	Value	***	***	***	***	***
COGS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Interest expense	Value	***	***	***	***	***
All other expenses	Value	***	***	***	***	***
All other income	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***	***	***
COGS: Other factory	Ratio to NS	***	***	***	***	***
COGS: Total	Ratio to NS	***	***	***	***	***
Gross profit	Ratio to NS	***	***	***	***	***
SG&A expense	Ratio to NS	***	***	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***	***	***
Net income or (loss)	Ratio to NS	***	***	***	***	***

Table continued.

Table VI-3 Continued
Hexamine: U.S. producer Bakelite's results of merchant market operations, by item and period

Shares in percent; unit values in dollars per pound; count in number of firms reporting

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
COGS: Raw materials	Share of COGS	***	***	***	***	***
COGS: Direct labor	Share of COGS	***	***	***	***	***
COGS: Other factory	Share of COGS	***	***	***	***	***
COGS: Total	Share of COGS	***	***	***	***	***
Merchant market sales	Unit value	***	***	***	***	***
COGS: Raw materials	Unit value	***	***	***	***	***
COGS: Direct labor	Unit value	***	***	***	***	***
COGS: Other factory	Unit value	***	***	***	***	***
COGS: Total	Unit value	***	***	***	***	***
Gross profit or (loss)	Unit value	***	***	***	***	***
SG&A expenses	Unit value	***	***	***	***	***
Operating income or (loss)	Unit value	***	***	***	***	***
Net income or (loss)	Unit value	***	***	***	***	***
Operating losses	Count	***	***	***	***	***
Net losses	Count	***	***	***	***	***
Data	Count	1	1	1	1	1

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

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

Table VI-4
Hexamine: Changes in merchant market AUVs between comparison periods

Changes in percent

Item	2021-23	2021-22	2022-23	Jan-Jun 2023-24
Merchant market sales	***	***	***	***
COGS: Raw materials	***	***	***	***
COGS: Direct labor	***	***	***	***
COGS: Other factory	***	***	***	***
COGS: Total	***	***	***	***

Table continued.

Table VI-4 Continued
Hexamine: Changes in merchant market AUVs between comparison periods

Changes in dollars per pound

Item	2021-23	2021-22	2022-23	Jan-Jun 2023-24
Merchant sales	***	***	***	***
COGS: Raw materials	***	***	***	***
COGS: Direct labor	***	***	***	***
COGS: Other factory	***	***	***	***
COGS: Total	***	***	***	***
Gross profit or (loss)	***	***	***	***
SG&A expense	***	***	***	***
Operating income or (loss)	***	***	***	***
Net income or (loss)	***	***	***	***

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

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Net sales

Total market

As shown in table VI-1, both the quantity and value of the industry's total market net sales increased overall between 2021 and 2023, and the quantity and value were higher in interim 2024 when compared with the same period in 2023.[5]

The industry's total net sales AUV increased from $*** per pound in 2021 to $*** per pound in 2023, reflecting the larger increase in net sales value compared to the increase in net sales quantity. The industry's net sales AUV was lower in interim 2024, at $*** per pound, than in interim 2023, at $*** per pound, which is attributable to the smaller increase in net sales quantity compared to the decrease in net sales value between the comparable interim periods.

Merchant market

The merchant market sales trends were similar to the trends for total market net sales for 2021 to 2023. As shown in table VI-3, the industry's merchant market sales, by both quantity and value, increased between 2021 and 2023. Additionally, the merchant market net sales quantity and value were higher in interim 2024 than they were in interim 2023.[6]

The industry's merchant market net sales AUV increased from $*** per pound in 2021 to $*** per pound in 2023, reflecting the larger increase in net sales value compared to the increase in net sales quantity. The industry's net sales AUV was lower in interim 2024, at $*** per pound, than in interim 2023, at $*** per pound, which is attributable to the smaller increase in net sales value compared to the increase in net sales quantity between the comparable interim periods.

[5] Net sales quantity for the total market increased by *** percent and net sales value increased by *** percent between 2021 and 2023. Net sales quantity was *** percent higher in interim 2024 compared with interim 2023. In the same interim periods, the net sales value was *** percent lower.

[6] Merchant market sales quantity increased by *** percent and merchant sales value increased by *** percent between 2021 and 2023. Merchant market sales quantity was *** percent higher in interim 2024 compared with interim 2023. In the same interim periods, the merchant market sales value was *** percent higher.

Cost of goods sold and gross profit or loss

Total market

Raw material costs, direct labor, and other factory costs accounted for ***, ***, and *** percent of total market COGS, respectively, in 2023. Total raw material costs irregularly increased from $*** in 2021 to $*** in 2023, and were lower in interim 2024, at $*** than in interim 2023, at $***. On a per-pound basis, raw material costs irregularly increased from $*** in 2021 to $*** in 2023 and were lower in interim 2024, at $***, than in interim 2023, at $***. Table VI-5 presents raw materials, by type.[7]

Table VI-5
Hexamine: U.S. producer Bakelite's total market raw material costs in 2023

Value in 1,000 dollars; unit values in dollars per pound; share of value in percent

Item	Value	Unit value	Share of value
Ammonia	***	***	***
Formaldehyde	***	***	***
All raw materials	***	***	100.0

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

The industry's cost of direct labor irregularly decreased from $*** in 2021 to $*** in 2023 but was higher in interim 2024 ($***) than in interim 2023 ($***). The average unit cost of direct labor decreased from $*** per pound in 2021 to $*** per pound in 2023 and stayed the same in the interim periods ($*** per pound).

Other factory costs increased from $*** in 2021 to $*** in 2023 and were higher in interim 2024, at $*** than in interim 2023, at $***. On a per-pound basis, other factory costs increased from $*** per pound in 2021 to $*** per pound in 2023. Other factory costs were higher on a per-pound basis in interim 2024, at $***, than in interim 2023, at $***.[8]

Total COGS irregularly increased by *** percent, from $*** in 2021 to $*** in 2023. The increase in total COGS was larger than the increase in net sales value, which resulted in gross profit irregularly decreasing from $*** in 2021 to $***

[7] ***. Methanol is a raw material used for the production of formaldehyde. Bakelite submission to the USITC, October 29, 2024; Conference transcript, pp. 12-13, 28 (Bazinet).

[8] ***. Bakelite submission to the USITC, October 29, 2024.

in 2023. Total COGS was slightly higher in interim 2024 than in interim 2023. The increase in total COGS between the comparable interim periods combined with a decline in total sales value resulted in gross profit being lower in interim 2024, at $***, than in interim 2023, at $***. Total market COGS as a ratio to net sales value increased from *** percent in 2021 to *** percent in 2023 and was higher in interim 2024, at *** percent, than in interim 2023, at *** percent. Gross profit as a ratio to net sales decreased from *** percent to *** percent from 2021 to 2023 and was lower in interim 2024 (***) percent) than in interim 2023 (***) percent).

Merchant market

Raw material costs, direct labor, and other factory costs accounted for ***, ***, and *** percent of merchant market COGS, respectively, in 2023. Total raw material costs irregularly increased from $*** in 2021 to $*** in 2023 but were lower in interim 2024, at $***, than in interim 2023, at $***. On a per-pound basis, merchant market raw material costs irregularly increased from $*** in 2021 to $*** in 2023 but were lower in interim 2024, at $***, than in interim 2023, at $***.

The industry's cost of direct labor for the merchant market irregularly decreased from $*** in 2021 to $*** in 2023 but was higher in interim 2024 ($***) than in interim 2023 ($***). The average unit cost of direct labor decreased from $*** per pound in 2021 to $*** per pound in 2023 and stayed the same in the interim periods ($*** per pound).

Other factory costs for the merchant market increased from $*** in 2021 to $*** in 2023 and were higher in interim 2024, at $*** than in interim 2023, at $***. On a per-pound basis, other factory costs increased from $*** in 2021 to $*** in 2023. They were higher on a per-pound basis in interim 2024, at $***, than in interim 2023, at $***.

Merchant market COGS irregularly increased by *** percent, from $*** in 2021 to $*** in 2023. The increase in merchant market sales value was larger than the increase in COGS, which resulted in an overall increase in gross profit from $*** in 2021 to $*** in 2023. COGS was *** percent higher in interim 2024, at $***, than in interim 2023, at $***. The increase in COGS was larger than the increase in net sales value, which resulted in merchant market gross profit being lower in interim 2024, at $***, than in interim 2023, at $***.

Merchant market COGS as a ratio to net sales value increased from *** percent in 2021 to *** percent in 2023 and was higher in interim 2024, at *** percent, than in interim

2023, at *** percent. Gross profit as a ratio to net sales decreased from *** percent to *** percent from 2021 to 2023 and was lower in interim 2024 (***) percent) than in interim 2023 (***) percent).

SG&A expenses and operating income or loss

Total market

Total market SG&A expenses decreased overall from $*** in 2021 to $*** in 2023 and was higher in interim 2024, at $***, than in interim 2023, at $***.[9] The SG&A expense ratio (SG&A expenses as a share of sales) decreased from *** percent in 2021 to *** percent in 2023 but was higher in interim 2024, at *** percent, than in interim 2023, at *** percent.

Total market operating income decreased overall from $*** in 2021 to $*** in 2023. Operating income was lower in interim 2024 ($***) than interim 2023 ($***). The operating margin (operating income as a ratio to net sales) decreased overall from *** percent in 2021 to *** percent in 2023 and was lower in interim 2024 (*** percent) than in in interim 2023 (*** percent).

Merchant market

Merchant market SG&A expenses increased irregularly from $*** in 2021 to $*** in 2023 and were higher in interim 2024, at $***, than in interim 2023, at $***. The SG&A expense ratio for the merchant market (SG&A expenses as a share of sales) decreased from *** percent in 2021 to *** percent in 2023 but was higher in interim 2024, at *** percent, than in interim 2023, at *** percent.

Merchant market operating income increased irregularly from $*** in 2021 to $*** in 2023. Merchant market operating income was lower in interim 2024, at $***, than in interim 2023, at $***. The operating margin (operating income as a ratio to net sales) decreased from *** percent in 2021 to *** percent in 2023 and was lower in interim 2024, at *** percent, than in interim 2023, at *** percent.

[9] ***. Bakelite submission to the USITC, October 29, 2024.

All other expenses and net income or loss

Total market

Classified below the total market operating income level are interest expense, other expense, and other income, which are listed in table VI-1.[10] Interest expense for the total market increased from $*** in 2021 to $*** in 2023 and was higher in interim 2024, at $***, than in interim 2023, at $***. All other expenses for the total market increased from $*** in 2021 to $*** in 2022, and then decreased to $*** in 2023; they were higher in interim 2024, at $***, than in interim 2023, at $***.[11]

Total market net income decreased overall from $*** in 2021 to $*** in 2023 and was lower in interim 2024 $*** than in interim 2023 $***.

Merchant market

Classified below the total market operating income level are interest expense, other expense, and other income, which are listed in table VI-3.[12] Interest expense for the merchant market increased from $*** in 2021 to $*** in 2022 and 2023 and was higher in interim 2024, at $***, than in interim 2023, at $***.[13] All other expenses for the merchant market increased from $*** in 2021 to $*** in 2022 and 2023 and were higher in interim 2024, at $***, than in interim 2023, at $***.

Merchant market net income decreased overall from $*** in 2021 to $*** in 2023. Merchant market net income was lower in interim 2024 ($***) than in interim 2023 ($***).

[10] ***.

[11] ***. Bakelite submission to the USITC, October 29, 2024; Email from ***, October 30, 2024.

[12] ***.

[13] ***.

Variance analysis

A variance analysis for the total hexamine operations of the U.S. producer is presented in table VI-6.[14] The information for this variance analysis is derived from table VI-1. A variance analysis for the merchant market hexamine operations of the U.S. producer is presented in table VI-7, the information for which is derived from table VI-3.

The total market variance analysis in table VI-6 shows that the decrease in total market operating income between 2021 and 2023 was primarily attributable to an unfavorable cost/expense variance despite a smaller favorable price variance (i.e., cost/expense AUVs increased more than sales AUVs). Lower operating income in interim 2024 compared with interim 2023 is primarily attributable to an unfavorable price variance that outweighed smaller favorable cost/expense and volume variances.

[14] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

Table VI-6
Hexamine: Variance analysis on the total market operations of U.S. producer Bakelite between comparison periods

Value in 1,000 dollars

Item	2021-23	2021-22	2022-23	Jan-Jun 2023-24
Net sales price variance	***	***	***	***
Net sales volume variance	***	***	***	***
Total net sales variance	***	***	***	***
COGS cost variance	***	***	***	***
COGS volume variance	***	***	***	***
COGS total variance	***	***	***	***
Gross profit variance	***	***	***	***
SG&A cost variance	***	***	***	***
SG&A volume variance	***	***	***	***
SG&A total variance	***	***	***	***
Operating income price variance	***	***	***	***
Operating income cost/expense variance	***	***	***	***
Operating income volume variance	***	***	***	***
Operating income total variance	***	***	***	***

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

Note: Unfavorable variances (which are negative) are shown in parentheses, all others are favorable (positive).

The merchant market variance analysis in table VI-7 shows that the increase in merchant market operating income between 2021 and 2023 was primarily attributable to favorable price and volume variances that offset an unfavorable cost/expense variance. Lower merchant market operating income in interim 2024 compared with interim 2023 is primarily attributable to an unfavorable price variance that outweighed favorable cost/expense and volume variances.

Table VI-7
Hexamine: Variance analysis on the merchant market operations of U.S. producer Bakelite between comparison periods

Value in 1,000 dollars

Item	2021-23	2021-22	2022-23	Jan-Jun 2023-24
Commercial sales price variance	***	***	***	***
Commercial sales volume variance	***	***	***	***
Total commercial sales variance	***	***	***	***
COGS cost variance	***	***	***	***
COGS volume variance	***	***	***	***
COGS total variance	***	***	***	***
Gross profit variance	***	***	***	***
SG&A cost variance	***	***	***	***
SG&A volume variance	***	***	***	***
SG&A total variance	***	***	***	***
Operating income price variance	***	***	***	***
Operating income cost/expense variance	***	***	***	***
Operating income volume variance	***	***	***	***
Operating income total variance	***	***	***	***

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

Note: Unfavorable variances (which are negative) are shown in parentheses, all others are favorable (positive).

Capital expenditures, research and development expenses, assets, and return on assets

Table VI-8 presents Bakelite's total market capital expenditures, R&D expenses, assets, and return on assets, and the firm's narrative explanations of the nature, focus, and significance of the items are presented in table VI-9.[15]

The industry's capital expenditures declined between 2021 and 2023, but were higher in interim 2024 than interim 2023. These trends were primarily attributable to ***. R&D expenses, which increased overall during from 2021 to 2023 and were higher from January-June 2024 compared to January-June 2023, were reported to ***. As for assets in the industry, they were relatively stable for 2021 to 2023 and the corresponding ROA *** in *** three yearly periods.

Table VI-8
Hexamine: U.S. producer Bakelite's capital expenditures, R&D expenses, total net assets, and ROA, by item and period

Value in 1,000 dollars

Item	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Capital expenditures	***	***	***	***	***
R&D expenses	***	***	***	***	***
Total net assets	***	***	***	NA	NA
Return on assets	***	***	***	NA	NA

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

Note: NA indicates not applicable. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

[15] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value on a product-specific basis.

Table VI-9
Hexamine: U.S. producer Bakelite's narrative descriptions of its capital expenditures, R&D expenses, and total net assets

Firm	Narrative on capital expenditures
Capital expenditures	***
R&D expenses	***
Total net assets	***

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

Capital and investment

The Commission requested the U.S. producer of hexamine to describe any actual or potential negative effects of imports of hexamine from China, Germany, India, and Saudi Arabia on the firm's growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-10 presents the impact in each category and table VI-11 provides the U.S. producer's narrative responses. In addition, Bakelite reported that with reference to COVID-19, ***.[16]

[16] U.S. producer questionnaire response, section III-18.

Table VI-10
Hexamine: U.S. producer Bakelite's count indicating actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2021, by effect

Number of firms reporting

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-11
Hexamine: U.S. producer Bakelite's narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2021, by effect

Item	Firm name and narrative on impact of imports
***	***
***	***
***	***
***	***

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

Part VII: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

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

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

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

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the alleged subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

Subject foreign industries

The Commission issued foreign producers' or exporters' questionnaires to 16 firms believed to possibly produce and/or export hexamine in China, 4 firms believed to possibly produce and/or export hexamine in Germany, 7 firms believed possibly to produce and/or export hexamine in India, and 3 firms believed to possibly produce and/or export hexamine in Saudi Arabia.[3] Usable responses to the Commission's questionnaire were received from one firm in India (Kanoria Chemicals & Industries Limited or "Kanoria") and one firm in Saudi Arabia (Methanol Chemicals Company (Chemanol) or "Chemanol").[4]

Table VII-1 presents the number of producers/exporters in each subject foreign industry that responded to the Commission's questionnaire, their estimated shares of total production of hexamine within their respective subject foreign industry during 2023, and the estimated shares that their exports to the United States comprised as a share of the total exports of hexamine to the United States from their respective foreign industries in 2023.

Table VII-1
Hexamine: Number of responding producers/exporters, approximate share of production, and approximate share of total exports to the United States, by subject foreign industry, 2023

Subject foreign industry	Number of responding firms	Approximate share of production (percent)	Approximate share of total exports to U.S. (percent)
China	***	***	***
Germany	***	***	***
India (Kanoria)	***	***	***
Saudi Arabia (Chemanol)	***	***	***

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

Note: "Approximate share of production" and "approximate share of total foreign industry exports to U.S." reflect the responding firms' estimates of their production as a share of total foreign industry production of hexamine in 2023 and the responding firms' estimates of their exports to the United States in 2023 as a share of the total exports of hexamine to the United States from the respective foreign industry in 2023.

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

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

[4] During the staff conference, the petitioner indicated that there is generally one major producer of hexamine in three of the subject foreign industries (Prefere Paraform GmbH & Co. in Germany, Kanoria in India, and Chemanol in Saudia Arabia) with several major producers in China. Conference transcript, p. 21 (Roderick).

Table VII-2 presents information on the hexamine operations by responding foreign producer/subject foreign industry in China, Germany, India, and Saudi Arabia by firm.

Table VII-2
Hexamine: Summary data on responding subject foreign producers in 2023, by firm

Subject foreign industry and producer	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)
China	***	***	***	***	***	***
Germany	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***

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

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

Table VII-3 presents events in the subject foreign industries since January 1, 2021.

Table VII-3
Hexamine: Important industry events in the subject foreign industries since 2021

Item	Subject foreign industry	Event
Supply and marketing agreement	Germany	In September 2023, Prefere Paraform and Evos Rotterdam B.V. ("Evos"), reached an agreement under which Prefere Resins assumed the exclusive supply and marketing of hexamine and other chemicals to Evos' existing customers.
Plant opening	India	In September 2024, Kanoria opened a hexamine plant adding 18 metric tons per day to its production capacity. Kanoria also opened an additional plant to produce the input formaldehyde.

Source: "Prefrere Resins to Acquire the Supply and Marketing of Paraformaldehyde and Hexamethyelenetramine from Evos," Prefere Resins website. Accessed October 28, 2024. https://prefere.com/en/company/news/Evos-2023. "Kanoria Chemicals doubles hexamine production with new manufacturing plants in Guarat," *The Hindu Businessline,* September 6, 2024. https://www.thehindubusinessline.com/markets/stock-markets/kanoria-chemicals-doubles-hexamine-production-with-new-manufacturing-plants-in-gujarat/article68612998.ece.

Changes in operations

Subject producers were asked to report any changes in the character of their operations or organization relating to the production of hexamine or resulting from the COVID-19 pandemic since January 1, 2021. Companies were also asked to describe any anticipated changes to their operations with respect to hexamine. Saudi producer Chemanol ***.

Indian producer Kanoria also did not report any changes to its operations during the period of investigation. In response to the question about the COVID-19 pandemic, Kanoria responded, "***." With respect to anticipated changes in operations, Kanoria responded, "***."

Installed and practical overall capacity

Table VII-4 presents data on responding subject producers' installed capacity, practical overall capacity, and practical hexamine capacity and production on the same equipment. Installed or "theoretical" overall capacity measures the level of production firms could have attained based solely on existing capital investments and not considering other constraints such as availability of material inputs, labor force, and normal downtime. The two practical capacity measures take into consideration both existing capital investment as well as non-capital investment constraints. Practical overall capacity measures firms' capacity to produce hexamine as well as any other products produced using the same equipment/machinery, whereas practical hexamine capacity measures only the practical capacity of firms to produce hexamine based on firms' actual product mixes over the period.

Neither responding subject producer reported any production of alternate products using the same equipment and/or machinery as used to produce in-scope hexamine. As such, the reported overall production and hexamine production figures as well as the practical hexamine and practical overall figures for capacity and capacity utilization were identical.

Between 2021 and 2023, the two responding subject producers collectively reported a *** percent increase in installed overall capacity (increasing from *** pounds in 2021 to *** pounds in 2023). Reported installed overall capacity was constant between interim 2023 and interim 2024 at *** pounds. The two foreign producers' hexamine production increased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2023). Production was *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). Resultingly, the collective installed capacity utilization reported by the firms declined *** percentage points from 2021 to 2023 (from *** percent to *** percent) but was *** percentage points higher in interim 2024 than interim 2023 (*** percent compared to *** percent).

Between 2021 and 2023, the two responding subject producers collectively reported an *** percent increase in practical capacity (from *** pounds in 2021 and increasing to *** pounds in 2023). Practical capacity was *** percent higher in interim 2023 than interim 2024 (*** pounds compared to *** pounds). As noted, the two foreign producers' hexamine production collectively increased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2023) with production *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). Resultingly, practical capacity utilization increased irregularly *** percentage points from 2021 to 2023 (increasing from *** percent in 2021 to *** percent in 2022, then decreasing to *** percent in 2023). Practical capacity utilization was

*** percentage points higher in interim 2024 than interim 2023 (*** percent compared to *** percent).

Table VII-4
Hexamine: Producers' in subject foreign industries installed and practical capacity and production on the same equipment as subject production, by period

Capacity and production in 1,000 pounds; utilization in percent

Item	Measure	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Installed overall	Capacity	***	***	***	***	***
Installed overall	Production	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***
Practical overall	Production	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***
Practical Hexamine	Capacity	***	***	***	***	***
Practical Hexamine	Production	***	***	***	***	***
Practical Hexamine	Utilization	***	***	***	***	***

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

Constraints on capacity

Firms were asked to describe the constraints limiting their firm's practical overall capacity over the period. Neither responding foreign producer reported any such capacity constraints over the period. Indian firm Kanoria, however, noted, "***."

Operations on hexamine

Hexamine operations in the subject foreign industries

Table VII-5 presents information on subject producers' production, capacity, and capacity utilization for the two subject foreign industries from which questionnaires were received (India and Saudi Arabia).

The two responding foreign producers reported the majority of their shipments were export shipments in all periods (between *** percent and *** percent of total shipments across the periods) with home market shipments representing the remainder (between *** and *** percent of total shipments across the periods). The vast majority of reported home market shipments reported were commercial shipments, which accounted for between *** and *** percent of total shipments during 2021 to 2023 and the interim periods. Subject producers' exports to the United States as a share of their total shipments were between *** and *** percent (with the interim 2024 period representing the period with the highest share at *** percent).

Subject producers' exports to the United States increased irregularly by *** percent from 2021 to 2023 (decreasing from *** pounds in 2021 to *** pounds in 2022 before increasing to *** pounds in 2023). They were *** percent higher in interim 2024 than in interim 2023 (*** pounds in interim 2024 compared to *** pounds in interim 2023) and were projected to increase by *** percent in 2024 to slightly less than *** pounds before increasing by an additional *** percent in 2025 to more than *** pounds.

Exports to all other markets increased by *** percent from 2021 to 2023 (from *** pounds to *** pounds). They were *** percent lower in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). Exports to all other markets were projected to decrease by *** percent in 2024 to *** and decrease an additional *** percent in 2025 to *** pounds.

Table VII-5
Hexamine: Data on subject foreign industries, by item and period

Quantity in 1,000 pounds

Item	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
Capacity	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***
Internal consumption	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Home market shipments	***	***	***	***	***	***	***
Exports to the United States	***	***	***	***	***	***	***
Exports to all other markets	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***

Table continued

Table VII-5 Continued
Hexamine: Data on subject foreign industries, by item and period

Shares and ratios in percent

Item	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
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.

Practical hexamine capacity and production by subject foreign industry

Table VII-6 presents information on subject producers' production, capacity, and capacity utilization by subject country. As previously noted, from 2021 to 2023, the two responding subject producers collectively reported an *** percent increase in practical capacity (from *** pounds in 2021 and to *** pounds in 2023). Practical capacity was *** percent higher in interim 2023 than interim 2024 (*** pounds compared to *** pounds). As noted, the two foreign producers' hexamine production collectively increased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2023) with production *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). Resultingly, practical capacity utilization increased irregularly *** percentage points from 2021 to 2023 (increasing from *** percent in 2021 to *** percent in 2022, then decreasing to *** percent in 2023). Practical capacity utilization was *** percentage points higher in interim 2024 than interim 2023 (*** percent compared to *** percent).

From 2021 to 2023, practical hexamine capacity reported by Indian producer Kanoria increased by *** percent (from *** pounds in 2021 to *** pounds in 2023) and was *** percent higher in interim 2024 than in interim 2023 (*** pounds in interim 2023 compared *** pounds in interim 2024). The producer in India projected that capacity would increase *** percent in 2024 and 2025 as compared to 2023 (to *** pounds). The Indian producer's production increased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2023). Production in India was also *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds). The producer projected that hexamine production would increase *** percent in 2024 compared to 2023 (to *** pounds) and an additional *** percent increase in 2025 as compared to 2024 (to *** pounds). Kanoria's practical capacity utilization decreased irregularly *** percentage points from 2021 to 2023 (*** percent in 2021 to *** percent in 2022 and then increasing to *** percent in 2023). Practical capacity utilization was *** percentage points higher in interim 2024 as compared to interim 2023 (*** as compared to *** percent). Kanoria's practical capacity utilization was projected to be *** percent in 2024 and *** percent in 2025.

From 2021 to 2023, practical hexamine capacity reported by Saudi producer Chemanol increased by *** percent (from *** pounds in 2021 to *** pounds in 2023). Chemanol reported its capacity as being *** pounds for both interim 2023 and interim 2024). The Saudi producer projected that practical capacity would *** in 2024 and 2025 as in 2023. Production in Saudi Arabia increased by *** percent from 2021 to

2023 (from *** pounds to *** pounds). Production in Saudi Arabia was *** percent higher in interim 2024 as compared to interim 2023 (*** pounds compared to *** pounds). Chemanol projected that hexamine production would increase *** percent in 2024 as compared to 2023 to *** pounds and then decrease *** percent in 2025 as compared to 2024 to *** pounds. Chemanol's practical capacity utilization increased irregularly *** percentage points from 2021 to 2023 (increasing from *** percent in 2021 to *** percent in 2022 before decreasing to and *** percent in 2023). Chemanol's practical capacity utilization was *** percentage points higher in interim 2024 as compared to interim 2023 (*** percent in compared to *** percent). Chemanol projected its practical capacity utilization would be *** percent in 2024 and *** percent in 2025.

Table VII-6
Hexamine: Subject foreign industries' output: Practical capacity, by subject foreign industry and period

Practical capacity

Quantity in 1,000 pounds

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-6 Continued
Hexamine: Subject foreign industries' output: Production, by subject foreign industry and period

Production

Quantity in 1,000 pounds

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-6 Continued
Hexamine: Subject foreign industries' output: Capacity utilization ratio, by subject foreign industry and period

Capacity utilization

Ratios in percent

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-6 Continued
Hexamine: Subject foreign industries' output: Share of production, by subject foreign industry and period

Share of production

Shares in percent

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

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

Hexamine exports, by subject foreign industry

Table VII-7 presents information on subject producers' exports of hexamine by subject country. As noted, subject producers' exports to the United States collectively increased irregularly by *** percent from 2021 to 2023 (decreasing from *** pounds in 2021 to *** pounds in 2022 before increasing to *** pounds in 2023). They were *** percent higher in interim 2024 than in interim 2023 (*** pounds compared to *** pounds) and were projected to increase by *** percent in 2024 to slightly less than *** pounds before increasing by an additional *** percent in 2025 to more than *** pounds. Exports to all other markets increased by *** percent from 2021 to 2023 (from *** pounds to *** pounds). They were *** percent lower in interim 2024 than in interim 2023 (*** pounds compared to *** pounds). The producers projected exports to all other markets would decrease by *** percent in 2024 to *** and decrease an additional *** percent in 2025 to *** pounds.

Indian producer Kanoria's exports to the United States decreased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2022 and to *** pounds in 2023). It reported *** exports to the United States in interim 2023 and *** pounds of exports to the United States in interim 2024. It projected that its exports to the United States would be *** pounds in 2024 and increase *** percent, to *** in 2025. Kanoria's total exports increased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2023). It reported *** percent more exports in interim 2024 than interim 2023 (*** pounds compared to *** pounds). The company projected that its total exports would be *** percent higher in 2024 than its 2023 exports at *** pounds and would increase an additional *** percent in 2025, to *** pounds. The company reported that its exports to the United States as a share of its total shipments decreased *** percentage points from 2021 to 2023 (from *** percent to *** percent). In interim 2024, its exports to the United States as a share of its total shipments was *** percent. The company projected that its exports to the United States as a share of its total shipments would be *** percent in 2024 and 2025. Kanoria's share of total shipments exported increased irregularly from 2021 to 2023 (decreasing from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023). It projected its share of total shipments exported would be *** percent in 2024 and 2025.

Saudi producer Chemanol's exports to the United States increased irregularly *** percent from 2021 to 2023 (decreasing from *** pounds in 2021 to *** pounds in 2022 and then increasing to *** pounds in 2023). It reported exporting *** pounds to the United States in interim 2023 and exporting *** pounds to the United States in interim 2024, an increase of *** percent across the interim periods. It projected that its exports to the United States would increase *** percent in 2024 compared to 2023, to *** pounds, and then decrease *** percent from 2024 to 2025, to *** pounds. Chemanol's total exports increased irregularly *** percent from 2021 to 2023 (from *** pounds in 2021 decreasing to *** pounds in 2022 before increasing to *** pounds in 2023). It reported *** percent more exports in interim 2024 than interim 2023 (*** pounds compared to *** pounds). The company projected that its total exports would be *** percent higher in 2024 than its 2023 exports (at *** pounds) and would decrease *** percent in 2025 to *** pounds. The company reported that its exports to the United States as a share of its total shipments increased *** percentage points from 2021 to 2023 (from *** percent to *** percent). In interim 2024, its exports to the United States as a share of its total shipments was *** percentage points higher than interim 2023, at *** percent. The company projected that its exports to the United States as a share of its total shipments would be *** and *** percent in 2024 and 2025, respectively. Chemanol reported exporting virtually all of its shipments with its share of total shipments exported shares being *** percent or higher in all periods, including 2024 and 2025 projections.

Table VII-7
Hexamine: Subject foreign industries' exports: Exports to the United States, by subject foreign industry and period

Exports to the United States

Quantity in 1,000 pounds

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-7 Continued
Hexamine: Subject foreign industries' exports: Share of total shipments exported to the United States, by subject foreign industry and period

Share of total shipments exported to the United States

Share in percent

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-7 Continued
Hexamine: Subject foreign industries' exports: Total exports, by subject foreign industry and period

Total exports

Quantity in 1,000 pounds

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-7 Continued
Hexamine: Subject foreign industries' exports: Share of total shipments exported, by subject foreign industry and period

Share of total shipments exported

Share in percent

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

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

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

Hexamine end-of-period inventories, by subject foreign industry

Table VII-8 presents end-of-period inventories, by subject foreign industry.

Indian producer Kanoria reported that its end-of-period inventories decreased *** percent from 2021 to 2023 (from *** pounds in 2021 to *** pounds in 2022 and *** pounds in 2023). The company's end-of-period inventories for interim 2024 period were *** percent higher than those reported for the interim 2023 period (*** pounds compared to *** pounds). Kanoria projected its end of period inventories would be *** percent higher in 2024 than 2023, at *** pounds. It projected its end-of-period inventories from 2024 would increase an additional *** percent in 2025 to *** pounds. Kanoria's ratio of end-of-period inventories to total shipments by period decreased *** percentage points from 2021 to 2023 (from *** percent in 2021 to *** percent in 2023). The company's ratio of end-of-period inventories was *** percentage points higher in interim 2024 than interim 2023 (*** percent compared to *** percent). Based on Kanoria's projections, the ratios of end-of-period inventories would be *** and *** percent in 2024 and 2025, respectively.

Saudi producer Chemanol reported that its end-of-period inventories decreased irregularly *** percent from 2021 to 2023 (from *** pounds in 2021 increasing to *** pounds in 2022 and decreasing to *** pounds in 2023). The company's end-of-period inventories for interim 2024 period were *** percent lower than those reported for the interim 2023 period (*** pounds compared to *** pounds). Chemanol projected its end of period inventories would be *** percent higher in 2024 than 2023, at more than *** pounds. It projected end-of-period inventories would decrease by *** percent in 2025 to less than *** pounds. Chemanol's ratio of end-of-period inventories to total shipments decreased *** percentage points from 2021 to 2023 (increasing from *** percent in 2021 to *** percent before decreasing to *** percent in 2023). The company's ratio of end-of-period inventories was *** percentage points lower in interim 2024 than interim 2023 (*** percent compared to *** percent). Based on Chemanol's projections, the ratio of end-of-period inventories would be *** percent in both 2024 and 2025.

Resultingly, the responding companies' end-of-period inventories collectively decreased irregularly *** percent from 2021 to 2023 (increasing from *** pounds in 2021 to *** pounds in 2022, before decreasing to *** pounds in 2023). The companies' end-of-period inventories for interim 2024 period were *** percent lower than those reported for the interim 2023 period (*** pounds compared to *** pounds). The two companies collectively projected their end-of-period inventories would be *** percent higher in 2024 than 2023, at less than *** pounds. The companies' projected end-of-period

inventories would increase *** percent from 2024 to 2025, to over *** pounds. The ratio of end-of-period inventories to total shipments by period decreased *** percentage points from 2021 to 2023 (increasing from *** percent in 2021 to *** percent in 2022, before decreasing to *** percent in 2023). The companies' collective ratio of end-of-period inventories was *** percentage points lower in interim 2024 than interim 2023 (*** percent compared to *** percent). Based on the projections, the ratio of end-of-period inventories would be *** percent in both 2024 and 2025.

Table VII-8
Hexamine: Subject foreign industries' exports: Share of total shipments exported, by subject foreign industry and period

Inventories

Quantity in 1,000 pounds

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

Table continued.

Table VII-8 Continued
Hexamine: Subject foreign industries' exports: Share of total shipments exported, by subject foreign industry and period

Ratio of inventories to total shipments

Share in percent.

Subject foreign industry	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024	Projection 2024	Projection 2025
China	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***
India (Kanoria)	***	***	***	***	***	***	***
Saudi Arabia (Chemanol)	***	***	***	***	***	***	***
All subject foreign industries	***	***	***	***	***	***	***

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

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

Exports

Table VII-9 presents Global Trade Atlas ("GTA") data for exports under HS subheading 2933.69 ("Heterocyclic Compounds (Excluding Melamine) Containing an Unfused Triazine Ring (Whether or not Hydrogenated) in the Structure"), a category which contains hexamine, from subject foreign industries to the United States and to all destination markets. The table presents exports from subject exporters to the United States, global exports from subject exporters (exports to all destination markets), and shares of exports exported to the United States, by exporter and period. Exports to the United States collectively reported for the subject foreign industries under this category decreased 49.9 percent from 2021 to 2023 (from 219.6 million pounds in 2021 to 110.1 million pounds in 2023). Exports to all destination markets collectively reported for the subject foreign industries under this category decreased 14.0 percent from 2021 to 2023 (from 1.4 billion pounds in 2021 to 1.2 billion pounds in 2023).

Table VII-9
Heterocyclic Compounds (Excluding Melamine) Containing an Unfused Triazine Ring (Whether or not Hydrogenated) in the Structure: Global exports from subject exporters: Exports to the United States, by exporter and period

Quantity in 1,000 pounds

Exporter	Measure	2021	2022	2023
China	Quantity	204,450	199,950	95,976
Germany	Quantity	10,123	8,794	6,042
India	Quantity	4,736	3,235	1,629
Saudi Arabia	Quantity	259	222	6,408
Subject exporters	Quantity	219,568	212,201	110,055

Table continued.

Table VII-9 Continued
Heterocyclic Compounds (Excluding Melamine) Containing an Unfused Triazine Ring (Whether or not Hydrogenated) in the Structure: Global exports from subject exporters: Exports to all destination markets, by exporter and period

Quantity in 1,000 pounds

Exporter	Measure	2021	2022	2023
China	Quantity	1,266,742	1,238,373	1,070,610
Germany	Quantity	111,171	93,674	90,787
India	Quantity	20,810	23,977	24,433
Saudi Arabia	Quantity	4,363	14,224	20,293
Subject exporters	Quantity	1,403,086	1,370,246	1,206,122

Table continued.

Table VII-9 Continued
Heterocyclic Compounds (Excluding Melamine) Containing an Unfused Triazine Ring (Whether or not Hydrogenated) in the Structure: Global exports from subject exporters: Share of exports exported to the United States, by exporter and period

Shares in percent

Exporter	Measure	2021	2022	2023
China	Share	16.1	16.1	9.0
Germany	Share	9.1	9.4	6.7
India	Share	22.8	13.5	6.7
Saudi Arabia	Share	5.9	1.6	31.6
Subject exporters	Share	15.6	15.5	9.1

Source: Official exports statistics and official global imports statistics from Saudi Arabia (constructed exports) under HS subheading 2933.69 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed October 18, 2023.

Note: HS subheading 2933.69 includes out of scope products and therefore data are likely overstated.

U.S. inventories of imported merchandise

Table VII-10 presents data on U.S. importers' reported end-of-period inventories of hexamine as reported in questionnaire data.

*** U.S. importers reported holding any end-of-period inventories of imports from China across the period of investigation. U.S. importers reported *** pounds of inventories of imports of hexamine from Germany at the end of 2021 and *** pounds of inventories from Germany at the end of 2023 (they reported *** inventories from Germany in 2022 and *** pounds of inventories of imports from Germany in both interim periods). In 2021, inventories of imports from Germany represented *** percent of imports from Germany, U.S. shipments of inventories from Germany, and total shipments of imports from Germany in that period. In 2023, inventories of imports from Germany represented *** percent of imports from Germany, total shipments of inventories from Germany, and U.S. shipments of inventories from Germany in that period.

U.S. importers reported inventories of imports from India increased from *** pounds in 2021, to *** pounds in 2022, and then decreased slightly to *** pounds in 2023. U.S. importers' inventories of imports from India were *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds in interim 2023). The ratio of inventories of imports from India to imports from India, U.S. shipments of imports from India, and total shipments of imports from India all increased from 2021 to 2023. The ratio of inventories of imports from India to imports from India increased from *** percent in 2021 to *** percent in 2022 and to *** percent in 2023. It was lower in interim 2024 than in interim 2023 (*** percent compared to *** percent). The ratio of end-of-period inventories of imports from India to U.S. shipments and total shipments of imports from India increased from *** percent in 2021 to *** percent in 2022 and to *** percent in 2023. Both ratios were lower in interim 2024 than in interim 2023 (*** percent compared to *** percent).

U.S. importers reported end-of-period inventories from Saudi Arabia in 2023 (*** pounds and for interim 2024 (*** pounds). In 2023, these end of period inventories represented *** percent of imports from Saudi Arabia in that period, *** percent of U.S. shipments of imports from Saudi Arabia in that period, and *** percent of total shipments of imports from Saudi Arabia in that period. In interim 2024, the reported end of period inventories represented *** percent of imports from Saudi Arabia in that period, *** percent of U.S. shipments of imports from Saudi Arabia in that period, and *** percent of total shipments of imports from Saudi Arabia in that period.

Overall, U.S. importers reported inventories of imports from subject sources increased from *** pounds in 2021, to *** pounds in 2022, and to *** pounds in 2023, an increase of *** percent from 2021 to 2023. U.S. importers' inventories of imports from subject sources were *** percent higher in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds in interim 2023). The ratio of inventories of imports from subject sources to imports from subject sources increased from *** percent in 2021 to *** percent in 2022 and to *** percent in 2023. It was lower in interim 2024 than in interim 2023 (*** percent compared to *** percent). The ratio of end-of-period inventories of imports from subject sources to U.S. shipments and total shipments of imports from subject sources increased from *** percent in 2021 to *** percent in 2022 and to *** percent in 2023. Both ratios were higher in interim 2024 than in interim 2023 (*** percent compared to *** percent).

U.S. importers reported inventories of imports from nonsubject sources (almost entirely from ***) decreased from *** pounds in 2021, to *** pounds in 2022, and to *** pounds in 2023, a decrease of *** percent from 2021 to 2023. U.S. importers' inventories of imports from nonsubject sources were *** percent lower in interim 2024 compared to interim 2023 (*** pounds compared to *** pounds in interim 2023). The ratio of inventories of imports from nonsubject sources to imports from nonsubject sources increased from *** percent in 2021 to *** percent in 2022 before decreasing to *** percent in 2023. It was lower in interim 2024 than in interim 2023 (*** percent compared to *** percent). The ratios of end-of-period inventories of imports from nonsubject sources to U.S. shipments and total shipments of imports from nonsubject sources increased from *** and *** percent in 2021 to *** and *** percent in 2022 before decreasing to *** and *** percent in 2023, respectively. Both ratios were lower in interim 2024 than in interim 2023 (*** and *** percent, respectively, compared to *** and *** percent, respectively).

Table VII-10
Hexamine: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds; ratio in percent

Measure	Source	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Inventories quantity	China	***	***	***	***	***
Ratio to imports	China	***	***	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***	***	***
Ratio to total shipments of imports	China	***	***	***	***	***
Inventories quantity	Germany	***	***	***	***	***
Ratio to imports	Germany	***	***	***	***	***
Ratio to U.S. shipments of imports	Germany	***	***	***	***	***
Ratio to total shipments of imports	Germany	***	***	***	***	***
Inventories quantity	India	***	***	***	***	***
Ratio to imports	India	***	***	***	***	***
Ratio to U.S. shipments of imports	India	***	***	***	***	***
Ratio to total shipments of imports	India	***	***	***	***	***
Inventories quantity	Saudi Arabia	***	***	***	***	***
Ratio to imports	Saudi Arabia	***	***	***	***	***
Ratio to U.S. shipments of imports	Saudi Arabia	***	***	***	***	***
Ratio to total shipments of imports	Saudi Arabia	***	***	***	***	***
Inventories quantity	Subject	***	***	***	***	***
Ratio to imports	Subject	***	***	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***	***	***
Ratio to total shipments of imports	Subject	***	***	***	***	***

Table continued.

Table VII-10 Continued
Hexamine: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds; Ratios in percent

Measure	Source	2021	2022	2023	Jan-Jun 2023	Jan-Jun 2024
Inventories quantity	Russia	***	***	***	***	***
Ratio to imports	Russia	***	***	***	***	***
Ratio to U.S. shipments of imports	Russia	***	***	***	***	***
Ratio to total shipments of imports	Russia	***	***	***	***	***
Inventories quantity	All other sources	***	***	***	***	***
Ratio to imports	All other sources	***	***	***	***	***
Ratio to U.S. shipments of imports	All other sources	***	***	***	***	***
Ratio to total shipments of imports	All other sources	***	***	***	***	***
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.

Note: 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 “---“. Quantities shown as “0” represent quantities greater than zero pounds but less than 500 pounds.

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of hexamine from China, Germany, India, and/or Saudi Arabia after June 30, 2024. Of the ten responding U.S. importers, five U.S. importers reported such arranged imports. Their reported data is presented in table VII-11. As shown, responding importers collectively reported *** pounds in arranged imports for July 2024 through June 2025, *** percent of which are from subject sources. Of the *** pounds in reported arranged imports from subject sources, *** percent were reported as being arranged from India, *** percent were reported as being arranged from Germany, *** percent were reported as being arranged from Saudi Arabia, and *** imports were reported as being arranged from China.

Table VII-11
Hexamine: U.S. importers' arranged imports, by source and period

Quantity in 1,000 pounds

Source	Jul-Sep 2024	Oct-Dec 2024	Jan-Mar 2025	Apr-Jun 2025	Total
China	***	***	***	***	***
Germany	***	***	***	***	***
India	***	***	***	***	***
Saudia Arabia	***	***	***	***	***
Subject sources	***	***	***	***	***
Subject sources less China	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
Nonsubject sources plus China	***	***	***	***	***
All import sources	***	***	***	***	***

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

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

Third-country trade actions

Based on available information, hexamine from the subject countries has not been subject to other antidumping or countervailing duty investigations outside the United States during the period of investigation.[5]

Information on nonsubject countries

Table VII-12 presents data for global exports of heterocyclic compounds containing an unfused triazine ring under HS 2933.69, this subheading that includes out-of-scope products. In each of the years of the period of investigation, subject exporters and the United States combined for a more than 72.0 percent share by quantity of global exports. China was the largest global exporter during the period of investigation, with its share of global exports by quantity increasing from 63.4 percent in 2021 to 70.6 percent in 2023. Russia's exports under 2933.69 decreased from 41.9 million pounds in 2021 to 16.6 million pounds in 2023.[6] Petitioner notes that this decline coincided with the build up to the invasion of Ukraine, emphasizing hexamine's use in producing the explosive RDX.[7]

[5] On October 20, 2020 India terminated antidumping duties on hexamine produced in or originating from China and the United Arab Emirates. These duties of $84.25 per metric ton were initiated in March 2014. WTO Trade Remedies Portal, accessed October 30, 2024. 14/16/2013-1/2 - Investigation details - Trade Remedies Data Portal

[6] Official global imports statistics from Russia (constructed exports) under HS subheadings 2933.69 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed October 28, 2024.

[7] Petition, vol. 1, pp. 18–19.

Table VII-12
Heterocyclic Compounds (Excluding Melamine) Containing an Unfused Triazine Ring (Whether Or Not Hydrogenated) In The Structure: Global exports, by reporting country and by period

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

Exporting country	Measure	2021	2022	2023
United States	Quantity	35,035	34,405	22,520
China	Quantity	1,266,742	1,238,373	1,070,610
Germany	Quantity	111,171	93,674	90,787
India	Quantity	20,810	23,977	24,433
Saudi Arabia	Quantity	4,363	14,224	20,293
Subject exporters	Quantity	1,403,086	1,370,246	1,206,122
Spain	Quantity	97,553	78,531	60,026
Japan	Quantity	57,746	54,068	39,921
United Kingdom	Quantity	30,006	40,709	36,340
Poland	Quantity	121,237	54,304	36,323
Belgium	Quantity	13,133	13,003	19,474
Russia	Quantity	41,914	41,258	16,580
Netherlands	Quantity	35,475	40,860	15,390
France	Quantity	20,344	22,173	14,016
All other exporters	Quantity	143,148	125,225	49,524
Nonsubject exporters	Quantity	560,557	470,131	287,594
All reporting exporters	Quantity	1,998,678	1,874,782	1,516,235
United States	Value	113,706	134,298	97,021
China	Value	1,599,917	1,908,910	1,224,621
Germany	Value	258,166	288,596	325,867
India	Value	101,060	116,697	117,585
Saudi Arabia	Value	3,445	13,483	11,100
Subject exporters	Value	1,962,588	2,327,686	1,679,173
Spain	Value	114,265	127,725	92,801
Japan	Value	107,600	110,588	77,211
United Kingdom	Value	19,878	34,840	24,706
Poland	Value	135,709	86,677	30,761
Belgium	Value	35,184	29,672	56,271
Russia	Value	19,566	22,009	6,527
Netherlands	Value	84,873	107,214	61,414
France	Value	40,525	53,820	37,722
All other exporters	Value	333,861	368,488	327,899
Nonsubject exporters	Value	891,462	941,033	715,312
All reporting exporters	Value	2,967,756	3,403,017	2,491,505

Table continued.

Table VII-12 Continued
Heterocyclic Compounds (Excluding Melamine) Containing an Unfused Triazine Ring (Whether Or Not Hydrogenated) In The Structure: Global exports, by reporting country and by period

Unit values in dollars per pound; shares in percent

Exporting country	Measure	2021	2022	2023
United States	Unit value	3.25	3.90	4.31
China	Unit value	1.26	1.54	1.14
Germany	Unit value	2.32	3.08	3.59
India	Unit value	4.86	4.87	4.81
Saudi Arabia	Unit value	0.79	0.95	0.55
Subject exporters	Unit value	1.40	1.70	1.39
Spain	Unit value	1.17	1.63	1.55
Japan	Unit value	1.86	2.05	1.93
United Kingdom	Unit value	0.66	0.86	0.68
Poland	Unit value	1.12	1.60	0.85
Belgium	Unit value	2.68	2.28	2.89
Russia	Unit value	0.47	0.53	0.39
Netherlands	Unit value	2.39	2.62	3.99
France	Unit value	1.99	2.43	2.69
All other exporters	Unit value	2.33	2.94	6.62
Nonsubject exporters	Unit value	1.59	2.00	2.49
All reporting exporters	Unit value	1.48	1.82	1.64
United States	Share of quantity	1.8	1.8	1.5
China	Share of quantity	63.4	66.1	70.6
Germany	Share of quantity	5.6	5.0	6.0
India	Share of quantity	1.0	1.3	1.6
Saudi Arabia	Share of quantity	0.2	0.8	1.3
Subject exporters	Share of quantity	70.2	73.1	79.5
Spain	Share of quantity	4.9	4.2	4.0
Japan	Share of quantity	2.9	2.9	2.6
United Kingdom	Share of quantity	1.5	2.2	2.4
Poland	Share of quantity	6.1	2.9	2.4
Belgium	Share of quantity	0.7	0.7	1.3
Russia	Share of quantity	2.1	2.2	1.1
Netherlands	Share of quantity	1.8	2.2	1.0
France	Share of quantity	1.0	1.2	0.9
All other exporters	Share of quantity	7.2	6.7	3.3
Nonsubject exporters	Share of quantity	28.0	25.1	19.0
All reporting exporters	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics and official global imports statistics from Saudi Arabia (constructed exports) under HS subheadings 2933.69 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed October 15, 2024.

Note: HS subheading 2933.69 includes out of scope products and therefore data are likely overstated. 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 "---". United States is shown at the top followed by the countries under investigation, all remaining top exporting countries in descending order of 2023 data.

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
89 FR 80929, October 4, 2024	*Hexamine (Hexamethylenetetramine) From China, Germany, India, and Saudi Arabia; Notice of Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.govinfo.gov/content/pkg/FR-2024-10-04/pdf/2024-22956.pdf
89 FR 87545, November 4, 2024	*Hexamethylenetetramine From the People's Republic of China, Germany, India, and Saudi Arabia: Initiation of Less-Than-Fair-Value Investigations*	https://www.govinfo.gov/content/pkg/FR-2024-11-04/pdf/2024-25525.pdf
89 FR 87560, November 4, 2024	*Hexamethylenetetramine From the People's Republic of China and India: Initiation of Countervailing Duty Investigations*	https://www.govinfo.gov/content/pkg/FR-2024-11-04/pdf/2024-25524.pdf

APPENDIX B

LIST OF STAFF CONFERENCE WITNESSES

PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared at the United States International Trade Commission's preliminary conference:

Subject: Hexamine from China, Germany, India, and Saudi Arabia

Inv. Nos.: 701-TA-737-738 and 731-TA-1712-1715 (Preliminary)

Date and Time: October 21, 2024 - 9:30 a.m.

Sessions were held in connection with these preliminary phase investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

In Support of Imposition (**Matthew L. Kanna**, Greenberg Traurig, LLP)
In Opposition to Imposition (**Namrita Raghuwanshi**, TPM Solicitors & Consultants)

In Support of the Imposition of the Antidumping and Countervailing Duty Orders:

Greenberg Traurig, LLP
Washington, DC
on behalf of

Bakelite LLC ("Bakelite")

Brad Roderick, Business Manager, Bakelite

Ronald Bazinet, Plant Manager, Bakelite

Jesse L. Neese, Director, Strategy and Regulatory Affairs, Bakelite

Stephanie Velez, Assistant Director, Greenberg Traurig, LLP

Clayton S. Kaier, Senior Trade Analyst, Greenberg Traurig, LLP

Maria Angelica Suarez Ibarra, International Law Clerk, Greenberg Traurig, LLP

Ana Leme, Project Assistant, Greenberg Traurig, LLP

In Support of the Imposition of the
Antidumping and Countervailing Duty Orders (continued):

Matthew L. Kanna)
) – OF COUNSEL
Friederike S. Görgens)

In Opposition to the Imposition of the
Antidumping and Countervailing Duty Orders:

TPM Solicitors & Consultants
New Delhi
on behalf of

Kanoria Chemicals & Industries Limited ("KCIL")

Sanjay Ojha (remote witness), Chief of Manufacturing & Projects, KCIL

Anil Sodah (remote witness), Assistant Vice President, KCIL

S. V. Kanoria (remote witness), Whole Time Director, KCIL

Namrita Raghuwanshi (remote witness))
AK Gupta (remote witness)) – OF COUNSEL
Harish Kesav (remote witnessv))

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Matthew L. Kanna**, Greenberg Traurig, LLP)
In Opposition to Imposition (**Namrita Raghuwanshi**, TPM Solicitors & Consultants)

APPENDIX C

SUMMARY DATA

Total market

Table C-1
Hexamine: Summary data concerning the U.S. total market, by item and period
Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data					Period changes			
	Calendar year			Jan-Jun		Comparison years			Jan-Jun
Item	2021	2022	2023	2023	2024	2021-23	2021-22	2022-23	2023-24
U.S. total market consumption quantity:									
Amount	***	***	***	***	***	▼***	▼***	▼***	▼***
Producers' share (fn1)	***	***	***	***	***	▲***	▲***	▼***	▲***
Importers' share (fn1):									
China	***	***	***	***	***	▲***	▲***	▲***	▼***
Germany	***	***	***	***	***	▼***	▼***	▼***	▲***
India	***	***	***	***	***	▼***	▼***	▼***	▲***
Saudi Arabia	***	***	***	***	***	▲***	▼***	▲***	▲***
Subject sources	***	***	***	***	***	▼***	▼***	▲***	▲***
Subject sources less China	***	***	***	***	***	▼***	▼***	▼***	▲***
Russia	***	***	***	***	***	▼***	▼***	▼***	▼***
All other sources	***	***	***	***	***	▲***	▲***	▼***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▼***	▼***	▼***
Nonsubject sources plus China	***	***	***	***	***	▼***	▼***	▲***	▼***
All import sources	***	***	***	***	***	▼***	▼***	▲***	▼***
U.S. total market consumption value:									
Amount	***	***	***	***	***	▲***	▲***	▼***	▼***
Producers' share (fn1)	***	***	***	***	***	▲***	▲***	▼***	▲***
Importers' share (fn1):									
China	***	***	***	***	***	▲***	▲***	▲***	▼***
Germany	***	***	***	***	***	▼***	▼***	▼***	▲***
India	***	***	***	***	***	▼***	▼***	▼***	▲***
Saudi Arabia	***	***	***	***	***	▲***	▼***	▲***	▲***
Subject sources	***	***	***	***	***	▼***	▼***	▲***	▲***
Subject sources less China	***	***	***	***	***	▼***	▼***	▲***	▲***
Russia	***	***	***	***	***	▼***	▼***	▲***	▼***
All other sources	***	***	***	***	***	▲***	▲***	▼***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▼***	▲***	▼***
Nonsubject sources plus China	***	***	***	***	***	▼***	▼***	▲***	▼***
All import sources	***	***	***	***	***	▼***	▼***	▲***	▼***
U.S. importers' U.S. shipments of imports from.--									
China:									
Quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
Value	***	***	***	***	***	▲***	▲***	▲***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Germany:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Value	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▼***	▲***	▼***
India:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Value	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Saudi Arabia:									
Quantity	***	***	***	***	***	▲***	▼***	▲***	▲***
Value	***	***	***	***	***	▲***	▼***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	***	▲***	▲***
Subject sources:									
Quantity	***	***	***	***	***	▼***	▼***	▲***	▲***
Value	***	***	***	***	***	▼***	▼***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***
Subject sources less China:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Value	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***

Table continued.

Table C-1 Continued
Hexamine: Summary data concerning the U.S. total market, by item and period
Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data					Period changes			
	Calendar year			Jan-Jun		Comparison years			Jan-Jun
Item	2021	2022	2023	2023	2024	2021-23	2021-22	2022-23	2023-24
U.S. importers' U.S. shipments of imports from.--Continued									
Russia:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
All other sources:									
Quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Value	***	***	***	***	***	▲***	▲***	▼***	▲***
Unit value	***	***	***	***	***	▼***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▲***	▼***	***
Nonsubject sources:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Nonsubject sources plus China:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▲***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
All import sources:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▲***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▲***	▼***	▼***
U.S. producers':									
Practical capacity quantity	***	***	***	***	***	▲***	▲***	▲***	▲***
Production quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Capacity utilization (fn1)	***	***	***	***	***	▼***	▲***	▼***	▲***
U.S. shipments:									
Quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Value	***	***	***	***	***	▲***	▲***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Export shipments:									
Quantity	***	***	***	***	***	▼***	▲***	▼***	▲***
Value	***	***	***	***	***	▼***	▲***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Inventories/total shipments (fn1)	***	***	***	***	***	▼***	▼***	▼***	▼***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	▼***	▲***	▼***	▲***
Hourly wages (dollars per hour)	***	***	***	***	***	▼***	▲***	▼***	▲***
Productivity (pounds per hour)	***	***	***	***	***	▲***	▲***	▼***	▲***
Unit labor costs	***	***	***	***	***	▼***	▼***	▼***	▼***

Table continued.

Table C-1 Continued
Hexamine: Summary data concerning the U.S. total market, by item and period
Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data					Period changes			
	Calendar year			Jan-Jun		Comparison years			Jan-Jun
Item	2021	2022	2023	2023	2024	2021-23	2021-22	2022-23	2023-24
U.S. producers'--Continued									
Net sales:									
Quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Value	***	***	***	***	***	▲***	▲***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Cost of goods sold (COGS)	***	***	***	***	***	▲***	▲***	▼***	▲***
Gross profit or (loss) (fn2)	***	***	***	***	***	▼***	▲***	▼***	▼***
SG&A expenses	***	***	***	***	***	▼***	▲***	▼***	▲***
Operating income or (loss) (fn2)	***	***	***	***	***	▼***	▲***	▼***	▼***
Net income or (loss) (fn2)	***	***	***	***	***	▼***	▲***	▼***	▼***
Unit COGS	***	***	***	***	***	▲***	▲***	▼***	▼***
Unit SG&A expenses	***	***	***	***	***	▼***	▲***	▼***	▲***
Unit operating income or (loss) (fn2)	***	***	***	***	***	▼***	▲***	▼***	▼***
Unit net income or (loss) (fn2)	***	***	***	***	***	▼***	▼***	▼***	▼***
COGS/sales (fn1)	***	***	***	***	***	▲***	▲***	▼***	▲***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	▼***	▼***	▲***	▼***
Net income or (loss)/sales (fn1)	***	***	***	***	***	▼***	▼***	▼***	▼***
Capital expenditures	***	***	***	***	***	▼***	▼***	▼***	▲***
Research and development expenses	***	***	***	***	***	▲***	▲***	▼***	▲***
Total assets	***	***	***	***	***	▼***	▲***	▼***	***

Source: Compiled data submitted in response to Commission questionniares. 508-compliant tables for these data are contained in parts III, IV, VI, and VII of this report.

Note.--Quantities and values shown as "0" represent non-zero amounts of less than 500 pounds or dollars. 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.

Merchant market

Table C-2

Hexamine: Summary data concerning U.S. market, limited to commercial sales, by item and period

Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data					Period changes			
	Calendar year			Jan-Jun		Comparison years			Jan-Jun
Item	2021	2022	2023	2023	2024	2021-23	2021-22	2022-23	2023-24
U.S. merchant market consumption quantity:									
Amount	***	***	***	***	***	▼***	▼***	▼***	▲***
Producers' share (fn1)	***	***	***	***	***	▲***	▲***	▼***	▲***
Importers' share (fn1):									
China	***	***	***	***	***	▲***	▲***	▲***	▼***
Germany	***	***	***	***	***	▼***	▼***	▼***	▲***
India	***	***	***	***	***	▼***	▼***	▼***	▲***
Saudi Arabia	***	***	***	***	***	▲***	▼***	▲***	▲***
Subject sources	***	***	***	***	***	▼***	▼***	▲***	▲***
Subject sources less China	***	***	***	***	***	▼***	▼***	▼***	▲***
Russia	***	***	***	***	***	▼***	▼***	▼***	▼***
All other sources	***	***	***	***	***	▲***	▲***	▼***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▼***	▼***	▼***
Nonsubject sources plus China	***	***	***	***	***	▼***	▼***	▲***	▼***
All import sources	***	***	***	***	***	▼***	▼***	▲***	▼***
U.S. merchant market consumption value:									
Amount	***	***	***	***	***	▲***	▲***	▼***	▼***
Producers' share (fn1)	***	***	***	***	***	▲***	▲***	▼***	▲***
Importers' share (fn1):									
China	***	***	***	***	***	▲***	▲***	▲***	▼***
Germany	***	***	***	***	***	▼***	▼***	▼***	▲***
India	***	***	***	***	***	▼***	▼***	▼***	▲***
Saudi Arabia	***	***	***	***	***	▲***	▼***	▲***	▲***
Subject sources	***	***	***	***	***	▼***	▼***	▲***	▲***
Subject sources less China	***	***	***	***	***	▼***	▼***	▲***	▲***
Russia	***	***	***	***	***	▼***	▼***	▲***	▼***
All other sources	***	***	***	***	***	▲***	▲***	▼***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▼***	▲***	▼***
Nonsubject sources plus China	***	***	***	***	***	▼***	▼***	▲***	▼***
All import sources	***	***	***	***	***	▼***	▼***	▲***	▼***
U.S. importers' U.S. shipments of imports from.--									
China:									
Quantity	***	***	***	***	***	▲***	▲***	▲***	▼***
Value	***	***	***	***	***	▲***	▲***	▲***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Germany:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Value	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▼***	▲***	▼***
India:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Value	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Saudi Arabia:									
Quantity	***	***	***	***	***	▲***	▼***	▲***	▲***
Value	***	***	***	***	***	▲***	▼***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	***	▲***	▲***
Subject sources:									
Quantity	***	***	***	***	***	▼***	▼***	▲***	▲***
Value	***	***	***	***	***	▼***	▼***	▲***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***
Subject sources less China:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Value	***	***	***	***	***	▼***	▼***	▼***	▲***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***

Table continued.

Table C-2 Continued

Hexamine: Summary data concerning U.S. market, limited to commercial sales, by item and period

Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data					Period changes			
	Calendar year			Jan-Jun		Comparison years			Jan-Jun
Item	2021	2022	2023	2023	2024	2021-23	2021-22	2022-23	2023-24
U.S. importers' U.S. shipments of imports from.--Continued									
Russia:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
All other sources:									
Quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Value	***	***	***	***	***	▲***	▲***	▼***	▲***
Unit value	***	***	***	***	***	▼***	▲***	▼***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▲***	▼***	***
Nonsubject sources:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Nonsubject sources plus China:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▲***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
All import sources:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▲***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▲***	▼***	▼***
U.S. producers':									
Commercial U.S. shipments:									
Quantity	***	***	***	***	***	▲***	▲***	▼***	▲***
Value	***	***	***	***	***	▲***	▲***	▼***	▼***
Unit value	***	***	***	***	***	▲***	▲***	▼***	▼***
Commercial 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)	***	***	***	***	***	▼***	▼***	▼***	▼***

Source: Compiled data submitted in response to Commission questionniares. 508-compliant tables for these data are contained in parts III, IV, VI, and VII of this report.

Note.--Quantities and values shown as "0" represent non-zero amounts of less than 500 pounds or dollars. 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.