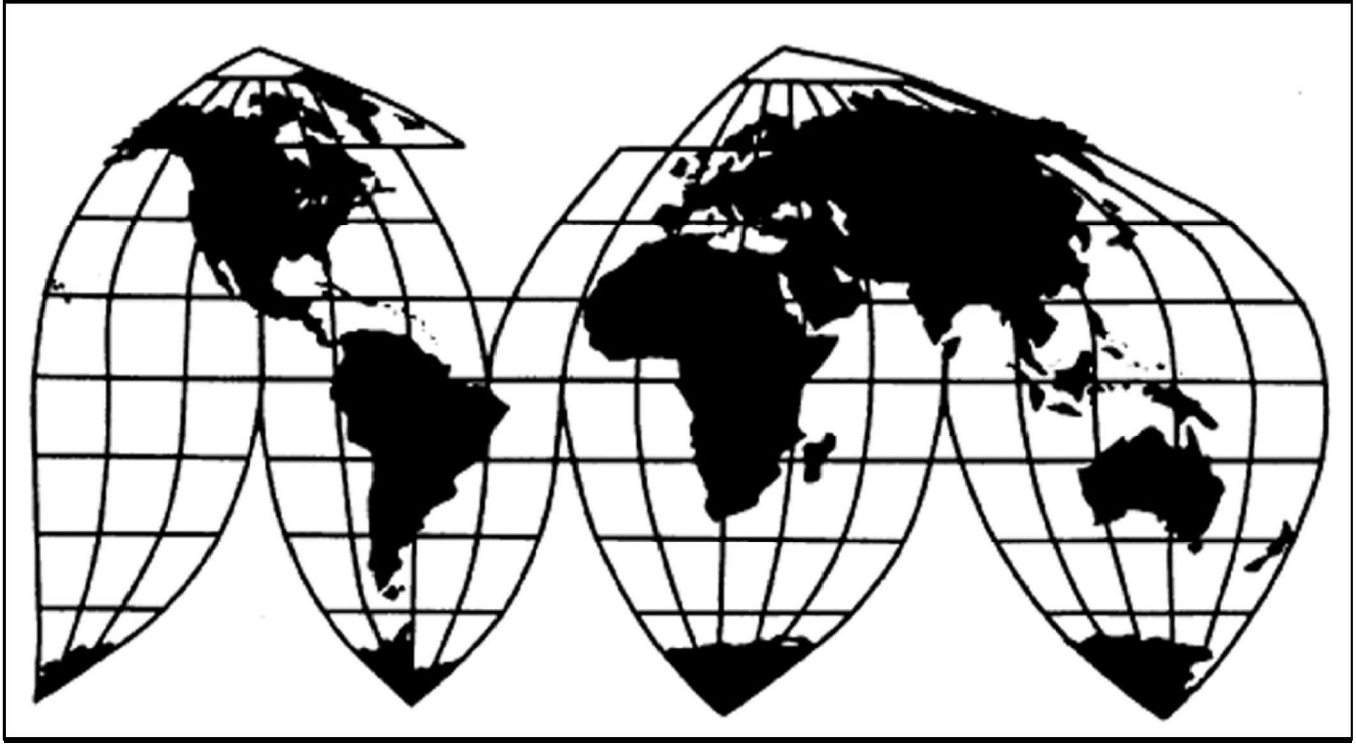
Alloy Magnesium from China

Investigation No. 731-TA-1071 (Third Review)

Publication 5238 **November 2021**

U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1071 (Third Review)

Alloy Magnesium from China

DETERMINATION

On the basis of the record[1] developed in the subject five-year review, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted this review on June 1, 2021 (86 FR 29280) and determined on September 7, 2021 that it would conduct an expedited review (86 FR 55636, October 6, 2021).

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

Views of the Commission

Based on the record of this five-year review, we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

Original Investigations. In April 2005, the Commission determined that an industry in the United States was materially injured by reason of alloy magnesium from China and pure and alloy magnesium from Russia sold at less-than-fair value.[1] The U.S. Department of Commerce ("Commerce") issued antidumping duty orders on April 15, 2005.[2]

First Reviews. On March 1, 2010, the Commission instituted its first five-year reviews of the antidumping duty orders on alloy magnesium from China and pure and alloy magnesium from Russia.[3] It subsequently determined to conduct full reviews.[4] In February 2011, the Commission determined that revocation of the antidumping duty order covering pure and alloy magnesium from Russia would not be likely to lead to continuation or recurrence of material injury to an industry in the United States and that revocation of the antidumping duty order covering alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[5] Consequently, Commerce revoked the orders on pure and alloy magnesium from Russia and issued a notice of continuation of the order on alloy magnesium from China.[6]

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[1] *Magnesium from China and Russia*, Inv. Nos. 731-TA-1071 and 1072 (Final), USITC Pub. 3763 (Apr. 2005) ("*Original Determinations*") at 3, 24.

[2] *Notice of Antidumping Duty Order: Magnesium Metal From the People's Republic of China*, 70 Fed. Reg. 19928, 19930 (Apr. 15, 2005).

[3] *Magnesium from China and Russia*, 75 Fed. Reg. 9252 (Mar. 1, 2010).

[4] *Magnesium from China and Russia*, 75 Fed. Reg. 48360 (Aug. 10, 2010). The Commission received a joint response from US Magnesium LLC ("US Magnesium") and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, Local 8319 ("Local 8319") as well as responses from several respondent interested parties in China and Russia. *Magnesium from China and Russia*, Inv. Nos. 731-TA-1071 and 1072 (Review), USITC Pub. 4214 (Feb. 2011) ("*First Review Determination*") at 3.

[5] *Magnesium from China and Russia*, Inv. Nos. 731-TA-1071 and 1072 (Review), USITC Pub. 4214 at 3, 31, 34 (Feb. 2011) ("*First Review Determination*").

[6] Commerce revoked the antidumping duty order on magnesium metal from Russia effective on April 15, 2010. *Magnesium Metal From the Russian Federation: Revocation of Antidumping Duty Order*,

Second Review. The Commission instituted its second five-year review of the order on alloy magnesium from China on February 1, 2016.[7] After conducting an expedited review,[8] the Commission reached an affirmative determination on June 30, 2016, and Commerce subsequently issued a notice of continuation of the order.[9]

Current Review. The Commission instituted this third five-year review of the order on June 1, 2021.[10] The Commission received a joint response to its notice of institution filed by US Magnesium, a domestic producer of alloy magnesium, and Local 8319, a union which represents workers at US Magnesium's production facility (collectively, "domestic parties").[11] The Commission did not receive a response to the notice of institution from any respondent interested party. On September 7, 2021, the Commission determined that the domestic interested party group response to its notice of institution was adequate.[12] In the absence of any respondent interested party response, or any other circumstances that would warrant a full review, the Commission determined that it would conduct an expedited review of the order.[13] The domestic parties filed final comments on October 14, 2021, supporting an affirmative determination, pursuant to Commission rule 207.62(d)(1).[14]

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76 Fed. Reg. 13128 (Mar. 10, 2011); *Magnesium Metal From the People's Republic of China: Continuation of Antidumping Duty Order*, 76 Fed. Reg. 13356 (Mar. 11, 2011).

[7] *Magnesium from China; Institution of a Five-Year Review*, 81 Fed. Reg. 5136 (Feb. 1, 2016).

[8] *Alloy Magnesium from China; Scheduling of an Expedited Five-Year Review*, 81 Fed. Reg. 32346 (May 23, 2016).

[9] *Alloy Magnesium from China; Determination*, 81 Fed. Reg. 44328 (July 7, 2016); *Magnesium from China*, Inv. No. 731-TA-1071 (Second Review), USITC Pub. 4618 (June 2016) ("*Second Review Determination*") at 3; *Magnesium Metal From the People's Republic of China: Continuation of Antidumping Duty Order*, 81 Fed. Reg. 47351 (July 21, 2016).

[10] *Magnesium from China; Institution of a Five-Year Review*, 86 Fed. Reg. 29280 (June 1, 2021).

[11] Domestic Interested Parties' Substantive Response to the Notice of Institution, EDIS Doc. 745874 (July 1, 2021) ("Response") at 2; Confidential Report ("CR"), Memorandum INV-TT-100, EDIS Doc. 750152 (Aug. 23, 2021) at I-2; *Alloy Magnesium from China,* Inv. No. 731-TA-1071 (Third Review), USITC Pub. 5238 (Nov. 2021) ("PR") at I-2. US Magnesium is an interested party pursuant to 19 U.S.C. § 1677(9)(C) ("a manufacturer, producer, or wholesaler in the United States of a domestic like product") and Local 8319 is an interested party pursuant to 19 U.S.C. § 1677(9)(D) ("a certified union or recognized union or group of workers which is representative of an industry engaged in the manufacture, production, or wholesale in the United States of a domestic like product").

[12] *Alloy Magnesium From China; Scheduling of Expedited Five-Rear Review*, 86 Fed. Reg. 55636 (Oct. 6, 2021) ("*Scheduling Notice*"); *Explanation of Commission Determination on Adequacy; Alloy Magnesium from China Inv. No. 731-TA-1071 (Third Review)*, EDIS Doc. 752681 (Sep. 27, 2021).

[13] *Scheduling Notice*, 86 Fed. Reg. 55636.

[14] Domestic Interested Parties' Confidential Final Comments, EDIS Doc. 754160 (Oct. 14, 2021) ("Final Comments") at 2.

U.S. industry data are based on information submitted by the domestic parties. US Magnesium estimates that it accounted for approximately *** percent of magnesium production in the United States in 2020.[15] U.S. import data and related information are based on Commerce's official import statistics.[16] Foreign industry data and related information are based on information furnished by the domestic parties, information from the prior proceedings, and publicly available information gathered by Commission staff.[17] Eight U.S. purchasers responded to the Commission's adequacy phase questionnaire.[18]

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[19] The Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle."[20] The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.[21]

Commerce has defined the scope of the antidumping order in this five-year review as follows:

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[15] CR/PR at Table I-1; Response at 15 n.45. We note that in the second review, the only domestic producer that responded to the notice of institution, US Magnesium, estimated that it accounted for *** percent of domestic magnesium production. *Confidential Views in the Second Review Determination,* EDIS Doc. 748689 ("*Confidential Second Review Determination*") at 4; *Second Review Determination*, USITC Pub. 4618 at 4.

[16] CR/PR at Table I-5.

[17] *See generally* CR/PR at I-21-22.

[18] CR/PR at D-3-4. *** responded to the Commission's purchaser questionnaire. *Id*.

[19] 19 U.S.C. § 1677(4)(A).

[20] 19 U.S.C. § 1677(10); *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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

[21] *See*, *e.g.*, *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

. . . {m}agnesium metal from the PRC, which includes primary and secondary alloy magnesium metal, regardless of chemistry, raw material source, form, shape, or size. Magnesium is a metal or alloy containing by weight primarily the element magnesium. Primary magnesium is produced by decomposing raw materials into magnesium metal. Secondary magnesium is produced by recycling magnesium-based scrap into magnesium metal. The magnesium covered by this investigation includes blends of primary and secondary magnesium.

The subject merchandise includes the following alloy magnesium metal products made from primary and/or secondary magnesium including, without limitation, magnesium cast into ingots, slabs, rounds, billets, and other shapes, magnesium ground, chipped, crushed, or machined into raspings, granules, turnings, chips, powder, briquettes, and other shapes; and products that contain 50 percent or greater, but less than 99.8 percent, magnesium, by weight, and that have been entered into the United States as conforming to an "ASTM Specification for Magnesium Alloy" and are thus outside the scope of the existing antidumping orders on magnesium from the PRC (generally referred to as "alloy" magnesium).

The scope of this order excludes: (1) all forms of pure magnesium, including chemical combinations of magnesium and other material(s) in which the pure magnesium content is 50 percent or greater, but less than 99.8 percent, by weight, that do not conform to an "ASTM Specification for Magnesium Alloy"; (2) magnesium that is in liquid or molten form; and (3) mixtures containing 90 percent or less magnesium in granular or powder form by weight and one or more of certain non-magnesium granular materials to make magnesium-based reagent mixtures, including lime, calcium metal, calcium silicon, calcium carbide, calcium carbonate, carbon, slag coagulants, fluorspar, nephaline syenite, feldspar, alumina (Al_2O_3), calcium aluminate, soda ash, hydrocarbons, graphite, coke, silicon, rare earth metals/mischmetal, cryolite, silica/fly ash, magnesium oxide, periclase, ferroalloys, dolomite lime, and colemanite.

The merchandise subject to this order is classifiable under items 8104.19.00, and 8104.30.00 of the Harmonized Tariff Schedule of the United States (HTSUS).

Although the HTSUS items are provided for convenience and customs purposes, the written description of the merchandise is dispositive. [22]

Magnesium, a silver-white metallic element, is the lightest of all structural metals with a density approximately 63 percent of that of aluminum, the principal metal with which it competes in the U.S. market. Magnesium's light weight and high vibrational-dampening properties have encouraged research to develop magnesium-based alloys with improved physical and mechanical properties for use as a structural metal in applications where minimizing weight is an important design consideration.[23]

Magnesium is available in two principal forms: pure and alloy.[24] Pure magnesium in unwrought form contains at least 99.8 percent magnesium by weight. Pure magnesium is widely used in commercial and industrial applications because it is easily machined and lightweight, has a high strength-to-weight ratio, has special electrical properties, and has special metallurgical and chemical properties that allow it to alloy well with metals, such as aluminum.[25] Alloy magnesium (or magnesium alloy) consists of magnesium and other metals, typically aluminum and zinc, containing less than 99.8 percent magnesium by weight but more than 50 percent magnesium by weight, with magnesium being the largest metallic element in the alloy by weight. Alloy magnesium has certain properties that improve its strength, ductility, workability, corrosion resistance, density, or castability compared to pure magnesium.[26] It is principally used in structural applications, primarily in castings (die, permanent mold, and sand) and extrusions for the automotive industry.[27]

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[22] *Magnesium Metal From the People's Republic of China: Final Results of Expedited Third Sunset Review of the Antidumping Duty Order*, 86 Fed. Reg. 51654, 51655 (Sep. 16, 2021) ("*Final Commerce Determination*"); *Issues and Decision Memorandum for the Final Results of Expedited Third Sunset Review of the Antidumping Duty Order on Magnesium Metal from the People's Republic of China*, EDIS Doc. 752665 (Sep. 10, 2021) ("*Commerce Final Decision Memorandum*") at 2-3.

[23] CR/PR at I-8.

[24] CR/PR at I-8.

[25] CR/PR at I-9. Pure magnesium is typically used in the production of aluminum alloy for use in beverage cans, in die cast automotive parts, in iron and steel desulfurization, as a reducing agent for various nonferrous metals (titanium, zirconium, hafnium, uranium, and beryllium), and in magnesium anodes for the protection of iron and steel in underground pipe and water tanks and various marine applications. It is also used in the production of titanium sponge, which is a precursor metal product in the production of titanium metal products for use in aerospace, medical, and industrial applications. *Id.*

[26] CR/PR at I-9. Pure magnesium is not used in structural applications because its tensile and yield strengths are low. *Id.*

[27] CR/PR at I-9. Alloy magnesium is typically produced to meet various industry-recognized ASTM specifications for alloy magnesium such as AM50A, AM60B, and AZ91D. *Id*.

Pure and alloy magnesium are produced as either primary or secondary magnesium. Primary magnesium is produced by decomposing raw materials into magnesium metal. Secondary magnesium is produced by recycling magnesium-based scrap.[28] Unwrought magnesium may be cast into ingots or may be granular magnesium, which consists of all other physical forms of magnesium, such as raspings, turnings, granules, and powders.[29]

B. The Prior Proceedings

In the original investigations, the Commission found pure and alloy magnesium to constitute a single domestic like product.[30] It based this decision on the shared essential physical characteristics of pure and alloy magnesium; the overlap in their uses, especially in aluminum production; the recognition by many industry participants of increased competition between pure and alloy magnesium; the same general channels of distribution for pure and alloy magnesium; and the convergence in prices for the two types of magnesium.[31] The Commission also found that cast and granular magnesium and primary and secondary magnesium were part of the same like product.[32]

In the full first five-year reviews, the Commission found that pure and alloy magnesium continued to be part of the same domestic like product.[33] No information developed in the reviews suggested that the physical characteristics, manufacturing facilities and employees, or the channels of distribution of the products had changed since the original investigations.[34] According to the Commission, the record generally supported a finding of limited one-way substitutability of alloy magnesium for pure magnesium in aluminum production (the market segment accounting for the largest share of U.S. magnesium producers' commercial shipments) and iron and steel desulfurization.[35] It observed that industry participants recognized increased competition between pure and alloy magnesium and that while aluminum producers may have had a preference for using pure magnesium in aluminum production, the record showed that

[28] CR/PR at I-9-10.
[29] CR/PR at I-10.
[30] *Original Determinations*, USITC Pub. 3763 at 6-11.
[31] *Original Determinations*, USITC Pub. 3763 at 6-11.
[32] *Original Determinations*, USITC Pub. 3763 at 6.
[33] *First Review Determination*, USITC Pub. 4214 at 7-10.
[34] *First Review Determination*, USITC Pub. 4214 at 7-9.
[35] *First Review Determination*, USITC Pub. 4214 at 9-10.

they used alloy magnesium when it was available at relatively attractive prices.[36] Prices for the two types of magnesium correlated for much of the period examined in those reviews.[37]

In the expedited second five-year review, the Commission determined that there was no new information in the record indicating that the characteristics of the product at issue had changed since the prior review, and the domestic interested parties generally agreed with the domestic like product definition adopted in the prior proceedings.[38] The Commission therefore defined the domestic like product as consisting of pure and alloy magnesium, including primary and secondary magnesium, and ingot (cast) and granular magnesium.[39]

C. The Current Review

In this review, the domestic parties "generally agree" with the Commission's definition of the domestic like product in prior proceedings.[40] There is no new information in the record indicating that the characteristics of alloy magnesium have changed so as to warrant revisiting the domestic like product definition.[41] We therefore define a single domestic like product consisting of pure and alloy magnesium, primary and secondary magnesium, and ingot (cast) and granular magnesium.

D. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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."[42] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the domestic like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

In the original investigations, the Commission found a single domestic industry consisting of all producers of magnesium, including grinders that produce granular magnesium

[36] *First Review Determination*, USITC Pub. 4214 at 10.
[37] *First Review Determination*, USITC Pub. 4214 at 10.
[38] *Second Review Determination*, USITC Pub. 4618 at 7.
[39] *Second Review Determination*, USITC Pub. 4618 at 7.
[40] Response at 28.
[41] *See generally* CR/PR at I-8-10.
[42] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

and die casters that recycle magnesium scrap.[43] It found that *** had imported the subject merchandise and was a related party, but did not find appropriate circumstances to exclude it from the domestic industry.[44]

In the first five-year reviews, the Commission found a single domestic industry, composed of the domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form.[45] US Magnesium argued that die casters that recycled the scrap generated in their die casting operations should not be treated as domestic producers if the die casters simply recycled "run-around scrap" and did not produce a saleable product.[46] As a result, the Commission examined whether Spartan Light Metal Products ("Spartan"), a die caster that recycled magnesium scrap, engaged in sufficient production-related activity to be treated as a domestic producer, and found that it did.[47]

In the second five-year review, the Commission again defined a single domestic industry composed of all domestic producers of the domestic like product.[48]

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[43] *Original Determinations*, USITC Pub. 3763 at 11. The Commission included grinders that produce granular magnesium in the domestic industry based on the relatively high amount of value added by grinders and the fact that grinders were included in the most recent prior investigation involving magnesium. *Id.* at 11-12.

[44] *Confidential Original Views,* EDIS Doc. 748532 ("*Confidential Original Determinations*") at 15; *Original Determinations*, USITC Pub. 3763 at 11-12. *** imports of subject merchandise were *** compared to *** domestic production, and ***. *Id*.

[45] *First Review Determination*, USITC Pub. 4214 at 11. In the first reviews, ESM Group, Inc. ("ESM Group"), a magnesium grinder, and ESM Tianjin Co., Ltd., a producer of magnesium in China, were affiliated by virtue of a common owner. ESM Tianjin did not participate in the review and it was not clear if it exported subject merchandise and thus was a related party. Nonetheless, the Commission considered and found that appropriate circumstances did not exist to exclude ESM Group from the domestic industry as there was no information on the record suggesting that it might be shielded from any injury on account of its affiliation with the Chinese magnesium producer and data submitted by U.S. grinders was not included in U.S. producer data presented in the report to avoid double counting. *Id.* at 12.

[46] *First Review Determination*, USITC Pub. 4214 at 11.

[47] *First Review Determination*, USITC Pub. 4214 at 12. The Commission highlighted Spartan's seemingly significant capital investment in its scrap recycling operations, the not insignificant employment in its operations, and the fact that the technical expertise involved in Spartan's scrap recycling production activities appeared to be comparable to that involved in secondary magnesium production for other producers. *Id.*

[48] *Second Review Determination*, USITC Pub. 4618 at 8-9. The domestic interested parties made the same argument that they did in the first review by taking the position that die casters that recycle their own scrap generated in their die casting operations should not be treated as domestic producers if the die casters simply recycle "run-around scrap" and are not producing a saleable product. The Commission found that because of the expedited nature of the second review, there was limited information on the record regarding die casters' production-related activities. Because of the absence of any new information on the issue, the Commission found that there was no basis to make any finding

In the current review, the domestic parties "generally agree" with the Commission's definition of the domestic industry from the prior proceedings.[49] There are no related party issues in this review.[50] Accordingly, we again define a single domestic industry composed of all domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot (cast) and granular form.

III. Revocation of the Antidumping Order Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[51] The Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") states that "under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports."[52] Thus, the likelihood standard is

about the nature of die casters' production-related activities contrary to its determination in the first five-year reviews. *Id.*

[49] *See* Response at 28. However, as in the first and second reviews, the domestic parties contend that die casters that recycle their own scrap generated in their die casting operations should not be treated as domestic producers if the die casters simply recycle "run-around scrap" and are not producing a saleable product.[49] Because of the expedited nature of this review, there is no new information on the current record regarding die casters' current production-related activities, and thus, we find that there is no basis to make any finding about the nature of die casters' production-related activities contrary to the Commission's determinations in the first and second reviews and inclusion of such firms in the definition of the domestic industry.

[50] *See* Response at 25, Attachment 9; *Responses to Supplemental Questions*, EDIS Doc. 746686 (Jul. 13, 2021).

[51] 19 U.S.C. § 1675a(a).

[52] SAA, H.R. Rep. 103-316, vol. 1 at 883-84 (1994). The SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

prospective in nature.[53] The U.S. Court of International Trade ("CIT") has found that "likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.[54]

The statute states that "the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[55] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case, but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in original investigations."[56]

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated."[57] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce

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[53] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

[54] *See NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int'l Trade 2003) ("'likely' means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)"), *aff'd mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) ("more likely than not" standard is "consistent with the court's opinion;" "the court has not interpreted 'likely' to imply any particular degree of 'certainty'"); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) ("standard is based on a likelihood of continuation or recurrence of injury, not a certainty"); *Usinor v. United States*, 26 CIT 767, 794 (2002) ("'likely' is tantamount to 'probable,' not merely 'possible'").

[55] 19 U.S.C. § 1675a(a)(5).

[56] SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." *Id*.

[57] 19 U.S.C. § 1675a(a)(1).

regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[58] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[59]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[60] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) 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.[61]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[62]

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing

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[58] 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings with respect to the order under review. *See Commerce Final Decision Memorandum* at 4.

[59] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

[60] 19 U.S.C. § 1675a(a)(2).

[61] 19 U.S.C. § 1675a(a)(2)(A-D).

[62] *See* 19 U.S.C. § 1675a(a)(3). The SAA states that "{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[63] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the order under review and whether the industry is vulnerable to material injury upon revocation.[64]

No respondent interested party participated in this review. The record, therefore, contains limited new information with respect to the alloy magnesium industry in China. There also is limited information regarding the alloy magnesium market in the United States during the period of review. Accordingly, for our determination, we rely, as appropriate, on the limited new information on the record in this review and the facts available from the prior proceedings.

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[65] The following conditions of competition inform our determination.

1. The Prior Proceedings

Demand Conditions. In the original investigations, the Commission explained that demand for magnesium is derived from the demand for the applications in which it is used and generally tracks overall economic activity.[66] Whereas parties reported no change or slight increases in demand, record data indicated that apparent U.S. consumption generally declined.[67]

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[63] 19 U.S.C. § 1675a(a)(4).

[64] The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission "considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." SAA at 885.

[65] 19 U.S.C. § 1675a(a)(4).

[66] *Original Determinations*, USITC Pub. 3763 at 16.

[67] *See Original Determinations*, USITC Pub. 3763 at 16.

In the first and second five-year reviews, the Commission found that the drivers of demand and principal uses for magnesium remained largely the same as in the original investigations.[68] Apparent U.S. consumption in both periods of review was lower than the peak level in 2003, during the period of investigation ("POI") of the original investigations (January 2000 to September 2004).[69]

Supply Conditions. In the original investigations, the Commission found that there were two domestic producers of primary pure and alloy magnesium during the POI: US Magnesium and Northwest Alloys (which ceased production in 2001).[70] According to the Commission, primary magnesium producers that used the electrolytic process (*i.e.*, US Magnesium) had a strong incentive to maintain a continuous level of production.[71] Nonsubject imports from several countries had been an important source of supply throughout the POI, but certain nonsubject supply sources were idled.[72]

In the first five-year reviews, the Commission found that US Magnesium was the only producer of primary magnesium in the United States for most of the review period.[73] US Magnesium's production capacity increased over that period, as did the production capacity of the Chinese alloy magnesium industry which expanded sharply between 2004 and 2009.[74] The

[68] *First Review Determination*, USITC Pub. 4214 at 23; *Second Review Determination*, USITC Pub. 4618 at 13. According to the Commission in the first five-year reviews, the use of magnesium in titanium sponge production was more significant than it was in the original investigations and was anticipated to grow. *First Review Determination*, USITC Pub. 4214 at 23.

[69] *First Review Determination*, USITC Pub. 4214 at 23; *Second Review Determination*, USITC Pub. 4618 at 13. Apparent U.S. consumption of magnesium (pure and alloy) was *** metric tons ("MT") in 2015, higher than in 2009 when it was *** MT, but still below the peak level of *** MT in 2003. *Confidential Second Review Determination*, EDIS Doc. 748689 at 18; *Second Review Determination*, USITC Pub. 4618 at 13.

[70] *Original Determinations*, USITC Pub. 3763 at 16. There were also four domestic producers of secondary magnesium and three grinders. The Commission observed that secondary magnesium production had become more significant in recent years. *Id.*

[71] *Original Determinations*, USITC Pub. 3763 at 17. This is because the electrolytic cells used to make primary magnesium must be kept in constant operation to avoid their deterioration and resulting significant rebuilding costs. *Id.*

[72] *Original Determinations*, USITC Pub. 3763 at 16-17. These idled facilities included Norsk Hydro in Norway, Pechiney in France, and Noranda's Magnolia plant in Canada. *Id.*

[73] *First Review Determination*, USITC Pub. 4214 at 24. The Commission observed that MagPro LLC, primarily a ***, began producing ***. There were also at least five domestic secondary producers of magnesium and three grinders during January 2004 to June 2010. *Confidential Views in the First Review Determination*, EDIS Doc. 748679 ("*Confidential First Review Determination*") at 34-35.

[74] *First Review Determination*, USITC Pub. 4214 at 24.

Commission observed that nonsubject imports held a significant share of the U.S. market between 2004 and 2009.[75]

In the second five-year review, the domestic industry's share of apparent U.S. consumption in 2015 was nearly double that of nonsubject imports, the next largest source of supply, and higher than in either the original investigations or first five-year reviews.[76] Subject imports were largely absent from the market in 2015.[77] Three purchasers identified changes or anticipated changes in the ability to increase production of magnesium.[78]

Substitutability and Other Conditions. In the original investigations, the Commission found that subject imports from China and Russia were generally substitutable for the domestic like product, that magnesium had few substitutes, and that magnesium of the same type (*i.e.*, pure or alloy) was a fungible commodity product, for which price was an important factor in purchasing decisions.[79] It also observed that domestically produced magnesium was sold predominantly through short- or long-term contracts, whereas subject imports were more likely to be sold on the spot market.[80]

In the first five-year reviews, the Commission found that the market for magnesium continued to be price competitive and magnesium of the same type continued to be a fungible, commodity product, with a moderately high degree of substitutability.[81]

In the second five-year review, the Commission found that the domestic like product and subject imports continued to have at least a moderately high degree of substitutability and that price remained an important factor in purchasing decisions. The Commission also found that the majority of US Magnesium's sales were through contracts and that most of these contracts covered a period of one year.[82]

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[75] *First Review Determination*, USITC Pub. 4214 at 24. The most significant development among nonsubject suppliers was the shutdown of most or all of the magnesium industry in Canada and a subsequent increase in nonsubject imports from Israel. *Id.*

[76] *Second Review Determination*, USITC Pub. 4618 at 13. In 2015, the domestic industry's share of apparent U.S. consumption was *** percent, while subject producers' share was *** percent and nonsubject imports' share was *** percent. *Second Review Determination*, USITC Pub. 4618 at 13-14; *Confidential Second Review Determination*, EDIS Doc. 748689 at 19.

[77] *Second Review Determination*, USITC Pub. 4618 at 13-14.

[78] Two purchasers pointed to *** while one purchaser cited *** *Second Review Determination*, USITC Pub. 4618 at 14 n.79; *Confidential Second Review Determination*, EDIS Doc. 748689 at 19 n.79.

[79] *Original Determinations*, USITC Pub. 3763 at 16, 18.

[80] *Original Determinations*, USITC Pub. 3763 at 16.

[81] *First Review Determination*, USITC Pub. 4214 at 24.

[82] *Second Review Determination*, USITC Pub. 4618 at 14.

2. The Current Review

Demand Conditions. The information available indicates that the factors driving demand for alloy magnesium have not significantly changed since the original investigations,[83] although demand decreased in 2020 as a result of the COVID-19 pandemic.[84] Apparent U.S. consumption was *** MT in 2020 compared to *** MT in 2015.[85] Three responding purchasers reported anticipating ***.[86]

Supply Conditions. In 2020, the domestic industry was the second largest supplier to the U.S. market, accounting for *** percent of apparent U.S. consumption by volume that year.[87] Since the prior five-year review, US Magnesium has invested in its U.S. operations to increase capacity, but reduced capital expenditures, capacity, and production in 2020 due to the COVID-19 pandemic.[88] [89] Several other events during the period of review affected the domestic industry's ability to supply magnesium, including a fire that disrupted one producer's production; the consolidation of two producers, resulting in a plant closure; and capacity expansions by two producers.[90]

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[83] Response at 15-16; Final Comments at 6-7.

[84] Response at 28.

[85] CR/PR at Table I-6. Apparent U.S. consumption by volume in 2020 was less than in 2003, 2009 and 2015. *Id*. However, we note that apparent U.S. consumption in 2020 may be understated relative to prior periods due to the lower coverage of domestic industry production, and thus U.S. shipments, in this review. The domestic parties estimate that US Magnesium accounted for *** percent of domestic production of magnesium in 2020, whereas the responding domestic producers in prior proceedings accounted for between *** and *** percent of domestic production of magnesium. *Id*. at I-14, Table I-1.

[86] CR/PR at D-8 (responses of ***). One of the three responding purchasers reported ***. *Id*. (response of ***).

[87] CR/PR Table I-6. We note that the U.S. industry's share of apparent U.S. consumption in 2020 may be understated relative to, and therefore incomparable to, prior periods due to the lower coverage of domestic industry production, and thus U.S. shipments, in this review. The domestic industry's share of U.S. consumption by volume was *** percent in 2003, *** percent in 2009, and *** percent in 2015. CR/PR at Table I-6.

[88] Response at 26-28. The domestic parties state that if market conditions improve, US Magnesium would be able to increase production to its "practical" capacity, restoring "meaningful" capacity to operation in six-to-eight weeks. Response at 26-27.

[89] In response to the Commission's notice of institution in this current review, the domestic interested parties provided a list of seven known and currently operating U.S. producers of magnesium: MagPro, LLC; AMACOR; MagReTech Inc. ("MagReTech"); Rossborough (an Opta Minerals Company); Luxfer Magtech; Meridian Technologies; and Spartan. Response at 25, Attachment 8.

[90] CR/PR at Table I-3. Specifically, there was a fire at a Magpro LLC facility in 2018 and production expansion by MagReTech in 2018. *Id.* Luxfer Holdings PLC acquired another domestic producer, ESM group, in late 2017 and then closed one of its plants in early 2018. *Id.* Spartan began constructing a new facility in 2018. *Id.*

Subject imports were the smallest source of supply to the U.S. market in 2020, accounting for *** percent of apparent U.S. consumption that year.[91]

Nonsubject imports were the largest source of supply to the U.S. market, accounting for *** percent of apparent U.S. consumption in 2020.[92]

Several responding purchasers reported changes or anticipated changes in supply. One responding purchaser reported that ***, and anticipated ***.[93] Another responding purchaser also anticipated ***.[94]

Substitutability and Other Conditions. The record in this review contains no new information to indicate that the degree of substitutability between the domestic like product and subject imports, or the importance of price in purchasing decisions, has changed since the prior reviews.[95] Accordingly, we again find that subject imports and the domestic like product have at least a moderately high degree of substitutability and that price remains an important factor in purchasing decisions.

C. Likely Volume of Subject Imports

1. The Prior Proceedings

Original Investigations. In the original investigations, the Commission found that the volume of cumulated subject imports of magnesium from China and Russia, and the increase in that volume, were significant, both in absolute terms and relative to production and consumption.[96] The volume of cumulated subject imports increased by 70.2 percent between January 2000 and September 2004, while apparent U.S. consumption fell over the same period.[97] The market share of cumulated subject imports increased markedly from 2000 to 2003, while the domestic industry's market share declined, although not to the same degree.[98]

[91] CR/PR Table I-6.

[92] CR/PR Table I-6. Taiwan was the largest source of nonsubject imports in 2020. CR/PR at Table I-5. We note that the share of nonsubject imports may be overstated relative to prior periods due to the lower coverage of domestic industry production, and thus U.S. shipments, in this review.

[93] CR/PR at D-4, 6 (response by ***).

[94] CR/PR at D-8 (response by ***).

[95] Domestic producers maintain that alloy magnesium from China is highly interchangeable with the domestic like product and that price is an important purchasing factor. Response at 16.

[96] *Original Determinations*, USITC Pub. 3763 at 18.

[97] *Original Determinations*, USITC Pub. 3763 at 17.

[98] *Original Determinations*, USITC Pub. 3763 at 17.

The ratio of cumulated subject imports to domestic production increased *** between January 2000 and September 2004.[99]

First Reviews. In the first five-year reviews, the Commission found that subject import volume from China was likely to be significant, both in absolute terms and as a share of the U.S. market, in the event of revocation.[100] According to the Commission, the magnesium industry in China had developed rapidly to become the world's largest manufacturer and exporter of magnesium and had the capability to significantly increase shipments of subject magnesium to the United States.[101] The Commission found that this increased capacity, along with a decline in the relative importance of the home market in China, led producers in China to rely to a significant degree on export markets.[102] It concluded that the existing antidumping duty order on pure magnesium, the ease with which producers in China could shift production to alloy magnesium, and the tendency for magnesium producers to operate at full capacity, created a powerful incentive for producers in China to export large volumes of subject imports to the United States should the order be revoked.[103]

Second Review. In the second five-year review, the Commission found that the volume of subject imports would likely be significant, both in absolute terms and as a share of the U.S. market, in the event of revocation.[104] The Commission observed that the annual volume of subject imports never exceeded 60 MT, which was far below peak 2003 levels, and that subject import market share, at ***, was lower than in 2009 (*** percent) and 2003 (*** percent).[105] Based on the information available, however, the Commission found that the industry in China

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[99] *Confidential Original Determinations*, EDIS Doc. 748532 at 23; *Original Determinations*, USITC Pub. 3763 at 18.

[100] *First Review Determination*, USITC Pub. 4214 at 26. The Commission did not exercise its discretion to cumulate imports of alloy magnesium from China with subject imports from Russia for its determinations in those reviews. *Id.* at 19.

[101] *First Review Determination*, USITC Pub. 4214 at 25.

[102] *First Review Determination*, USITC Pub. 4214 at 26. The Commission found that the elimination of a value added tax rebate on magnesium exports in 2006 and the imposition of a 10-percent export tax in 2008 appeared to do little to dampen Chinese magnesium exports. *Id.*

[103] *First Review Determination*, USITC Pub. 4214 at 26. As observed above, magnesium producers using the electrolytic process had an incentive to operate at full capacity to avoid deterioration of electrolytic cells. *Id.*

[104] *Second Review Determination*, USITC Pub. 4618 at 16.

[105] *Second Review Determination*, USITC Pub. 4618 at 15 n.92; *Confidential Second Review Determination*, EDIS Doc. 748689 at 22 n.92 (indicating that subject imports from China increased their share of the U.S. market from *** percent in 2000 to *** percent in 2001, *** percent in 2002, and *** percent in 2003). In 2003, subject imports from China totaled 12,906 MT. *Second Review Determination*, USITC Pub. 4618 at 15. *Id*.

had substantial capacity, including excess capacity, and was significantly export oriented.[106] Specifically, the domestic interested parties provided information showing that the Chinese industry's capacity increased by 48.1 percent from 2010 to 2014 and was expected to continue increasing.[107] The information available also showed that China was then the world's largest exporter of alloy magnesium and that its exports had increased annually since 2013,[108] when China removed a 10-percent export tax on magnesium alloy.[109] The Commission also observed that magnesium from China (including alloy magnesium) was subject to antidumping duties in Brazil.[110] Based on these considerations, as well as the increase in subject imports from China during the original investigations before the imposition of the order, the Commission concluded that producers in China would likely increase their exports of subject merchandise to the United States in the event of revocation, and that the volume of subject imports would likely be significant.[111]

2. The Current Review

The record in this review indicates that subject imports maintained a small presence in the U.S. market under the disciplining effect of the order. During the period of review, the volume of subject imports ranged from zero in 2017 to 183 MT in 2018, and was 53 MT in 2020, far below subject import volumes during the POI of the original investigations.[112] Subject imports accounted for *** percent of apparent U.S. consumption in 2020.[113]

Due to the expedited nature of this review, the record contains limited information on the industry in China. The information available indicates that subject producers have the means and incentive to increase their exports of subject merchandise to the U.S. market to significant levels if the order were revoked. According to United States Geological Survey

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[106] *Second Review Determination*, USITC Pub. 4618 at 15-16.

[107] *Second Review Determination*, USITC Pub. 4618 at 15-16. The Commission also observed that, according to the domestic parties, the industry in China in 2014 had an estimated capacity of 1.6 million MT to produce primary magnesium and a capacity utilization rate of 54.5 percent. *Second Review Determination* at 16.

[108] *Second Review Determination*, USITC Pub. 4618 at 16.

[109] *Second Review Determination*, USITC Pub. 4618 at 16.

[110] *Second Review Determination*, USITC Pub. 4618 at 16.

[111] The Commission noted that that in the first reviews, the record indicated that the U.S. market was attractive because prices in the United States were higher than in other markets and that there was no indication on the current record that the U.S. market is not attractive. *Second Review Determination*, USITC Pub. 4618 at 16 n.98.

[112] CR/PR at Tables I-5-6. During the original investigation, subject imports of alloy magnesium from China were 12,906 MT in 2003. *Id.* at Table I-6.

[113] CR/PR at Table I-6.

("USGS") data provided by the domestic producers, the magnesium industry in China has substantial capacity and excess capacity to produce alloy magnesium. These data show that the Chinese primary magnesium industry was the world's largest in 2018, having increased its share of total global primary magnesium capacity from 55.7 percent in 2003 to 85.7 percent in 2018.[114] While the Chinese primary magnesium industry increased its production capacity from *** MT in 2014 to *** MT in 2018,[115] the industry produced only 860,000 MT of primary magnesium in 2018, yielding a capacity utilization rate of 47.8 percent and substantial excess capacity.[116]

The record also indicates that subject producers remain export oriented. Global Trade Atlas ("GTA") data indicate that China was the world's largest exporter of magnesium containing under 99.8% magnesium by weight, unwrought, a category that includes alloy magnesium and out-of-scope products, throughout the current period of review, accounting for 61.0 percent of the total volume of global exports in 2020.[117] While these data also indicate that the United States was the third largest destination, these exports from China consist almost entirely of out-of-scope magnesium, in 2020.[118] Magnesium from China is currently subject to antidumping duties in Brazil.[119]

Given the Chinese industry's substantial capacity and excess capacity, its export orientation, the increase in subject imports from China during the original investigations before the imposition of the order, the Chinese industry's interest in and ability to access the U.S.

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[114] Response at Attachment 5. In 2018, the volume of Chinese production of primary magnesium reportedly was over *** that of apparent U.S. consumption. *Calculated using* Response at Attachments 2-3 *and* CR/PR at Table I-6.

[115] Response at 17, 20, Attachment 5. According to the domestic parties, 2018 was the most recent year in which USGS data was available. *Id.* at 19. The industry in China in 2014 reportedly had a capacity utilization rate of 54.5 percent. *Second Review Determination* at 16.

[116] Response at 17, 20, Attachments 2-3.

[117] CR/PR Table I-9.

[118] CR/PR Table I-8. The Netherlands and Canada were China's largest export markets for this product in 2020. *Id*. Commission Staff attributes the difference between subject import volume in CR/PR Table I-5 and exports from China to the United States in CR/PR Table I-8 to out-of-scope merchandise being included in the export data. *Compare* CR/PR Table I-8 (indicating exports from China to the U.S. in 2020 totaling 8,902 MT but also indicating that GTA data may be overstated as it may contain products outside the scope of this review) *to* CR/PR Table I-5 (indicating 53 MT of U.S. imports of subject merchandise from China).

[119] CR/PR at I-23. Additionally, the United States currently maintains antidumping duty orders on imports of pure ingot magnesium and pure granular magnesium from China. CR/PR at Table I-2; *Pure Magnesium From the People's Republic of China: Continuation of Antidumping Duty Order*, 82 Fed. Reg. 18114 (Apr. 17, 2017); *Pure Magnesium in Granular Form From the People's Republic of China: Continuation of the Antidumping Duty Order*, 83 Fed. Reg. 10676 (Mar. 12, 2018).

market with respect to out-of-scope magnesium, and the existence of a trade barrier in another third-country market, we find that the volume of subject imports would likely be significant, both in absolute terms and relative to consumption in the United States, if the order were revoked.

D. Likely Price Effects

1. The Prior Proceedings

Original Investigations. In the original investigations, the Commission found that the quarterly price comparison data showed significant underselling by cumulated subject imports from China and Russia during most of the POI.[120] The Commission observed that instances of overselling by cumulated subject imports occurred largely in the first three quarters of 2004, and may have been due at least in part to the filing of the petitions.[121] It also observed that purchasers confirmed a number of the lost sales and lost revenue allegations made by petitioners, and that these confirmed allegations involved substantial tonnage.[122] Additionally, the Commission found that the pricing data indicated that cumulated subject imports depressed domestic prices to a significant degree during the part of that period that preceded the filing of the petitions.[123]

First Reviews. In the first five-year reviews, the only available pricing data on subject imports from China were for the first quarter of 2004, when subject imports from China undersold the domestic like product by a margin of *** percent.[124] The Commission found that if the order were revoked, underselling was likely to be significant and that as a result, subject imports from China would likely have significant price-depressing or -suppressing effects.[125] It based this conclusion on the likely significant increase in subject import volume, the continued importance of price in purchasing decisions and substitutability between the domestic like

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[120] *Original Determinations*, USITC Pub. 3763 at 18-19. Subject imports undersold the domestic like product in 54 of 74 (or 72.9 percent of) possible quarterly comparisons. *Id.*

[121] *Original Determinations*, USITC Pub. 3763 at 19. The Commission explained overselling was due, in part, to the fact that subject imports from China were more likely than the domestic like product to be sold on the spot market. Spot prices adjusted to market conditions more quickly than contract prices. Thus, the prices of subject imports would be expected to increase more quickly than those for the domestic like product during a period of rising prices. *Id.* at 19-20.

[122] *Original Determinations*, USITC Pub. 3763 at 20.

[123] *Original Determinations*, USITC Pub. 3763 at 19.

[124] *Confidential First Review Determination*, EDIS Doc. 748679 at 39; *First Review Determination*, USITC Pub. 4214 at 27.

[125] *First Review Determination*, USITC Pub. 4214 at 27.

product and subject imports, the demonstrated willingness of producers in China to undersell the domestic like product during the original investigations, and the higher prices available for magnesium in the United States as compared to other markets.[126]

Second Review. In the second five-year review, the Commission found that subject producers would likely resume their behavior from the original investigations and significantly undersell domestically produced magnesium to gain market share.[127] It also found that because price continued to be an important factor in purchasing decisions and subject imports and the domestic like product remained substitutable, the likely significant volume of low-priced subject imports would likely force the domestic industry either to lower prices or lose sales. The Commission concluded that subject imports from China would likely have significant depressing or suppressing effects on prices for the domestic like product if the order were to be revoked.[128]

2. The Current Review

There is no new product-specific pricing information on the record due to the expedited nature of this review. We have found that subject import volume is likely to be significant if the order is revoked. Given the pervasiveness of underselling during the original investigations, the likely significant volume of subject imports upon revocation would likely undersell the domestic like product to a significant degree.[129] As previously discussed, we have found that subject imports and domestically produced alloy magnesium have at least a moderately high degree of substitutability and that price is an important factor in purchasing decisions. Consequently, the significant underselling by subject imports would likely force the domestic industry to either lower prices or lose sales. In light of these considerations, we find that subject imports would

[126] *First Review Determination*, USITC Pub. 4214 at 27.

[127] The Commission observed that the record did not contain any new product-specific pricing comparisons. *Second Review Determination*, USITC Pub. 4618 at 17.

[128] *Second Review Determination*, USITC Pub. 4618 at 17-18.

[129] As further evidence that significant subject import underselling is likely to resume after revocation, domestic producers claim that the average unit value ("AUV") of imports of alloy magnesium from China into Canada and Mexico in 2020, at $1.16 and $1.22 per pound, respectively, were *** than US Magnesium's cost of production that year, and indicative of the low subject import prices likely to prevail after revocation. *See* Response at 23, Attachment 6; *see also* CR/PR at Table I-4 (***). The domestic parties also claim that US Magnesium's sales contracts would not prevent adverse price effects if the order were revoked because the Commission's determination in this review coincides with annual contract negotiations in early November, a majority of its contracts are "only" one-year in length, and ***. Response at 23; Final Comments at 11.

likely have significant depressing or suppressing effects on prices for the domestic like product if the order were revoked.

E. Likely Impact

1. The Prior Proceedings

Original Investigations. In the original investigations, the Commission found that cumulated subject imports from China and Russia were having a significant adverse impact on the domestic magnesium industry.[130] Most of the domestic industry's trade and financial indicators were unfavorable and worsened during January 2000 to December 2003, until after the February 27, 2004 petitions in the original investigations were filed.[131] The Commission recognized that the domestic industry's performance improved at the end of the POI, especially in the first nine months of 2004, but attributed this improvement, at least in part, to the pendency of the investigations.[132]

First Reviews. In the first five-year reviews, the domestic industry's performance indicators generally fluctuated or improved over the period of review, before falling sharply in 2009, when demand for magnesium collapsed, then recovering somewhat in the first six months of 2010 as compared with the first six months of 2009.[133] The Commission observed that the industry's financial performance was the exception to this trend, as it was *** in 2008 and 2009.[134] It found that the likely significant volume of low-priced subject imports, when

[130] *Original Determinations*, USITC Pub. 3763 at 20.

[131] *Original Determinations*, USITC Pub. 3763 at 21-22.

[132] *Original Determinations*, USITC Pub. 3763 at 21.

[133] *First Review Determination*, USITC Pub. 4214 at 28. The domestic industry's production declined from 2004 to 2005, and then increased irregularly until 2009, when it fell ***. Production was *** higher in the first six months of 2010 than in the first six months of 2009. After declining from 2004 to 2005, the industry's capacity generally rose through the first six months of 2010. Capacity utilization fluctuated over the period, before falling *** in 2009, and then showed some improvement in the first six months of 2010 as compared with the first six months of 2009. Domestic producers' U.S. shipments showed a similar pattern. Inventories fluctuated over the period, before falling *** in 2009, and then showed some improvement in the first six months of 2010 as compared with the first six months of 2009. Productivity fluctuated over the period, before falling *** in 2009, and were lower in the first six months of 2010 as compared with the first six months of 2009. *Confidential First Review Determination*, EDIS Doc. 748679 at 41-42; *First Review Determination*, USITC Pub. 4214 at 28-29.

[134] *Confidential First Review Determination*, EDIS Doc. 748679 at 41; *First Review Determination*, USITC Pub. 4214 at 29. The domestic industry's financial performance showed mixed and generally weak results from the 2004 to 2007 period, followed by increasingly *** results in 2008 and 2009, which also carried over into the first six months of 2010. After registering mainly operating *** in 2004 to 2007, the industry's operating margin *** percent in 2008 and *** percent in 2009. A comparison of

combined with the likely adverse price effects of those imports, would likely have a significant adverse impact on the domestic industry's production, shipments, sales, revenue, employment, and profitability.[135]

Second Review. In the second five-year review, the Commission found that the condition of the domestic industry had generally improved since the original investigations.[136] The Commission also found that revocation of the order would likely result in a significant increase in subject import volume that would likely undersell the domestic like product and have significant price effects on the domestic industry, forcing domestic producers to cut prices or cede market share to subject imports. It concluded that if the order were revoked, subject imports from China would likely have a significant impact on domestic producers of magnesium within a reasonably foreseeable time.[137]

2. The Current Review

Due to the expedited nature of this review, the record contains limited information on the domestic industry's performance since the prior proceedings. This limited information is insufficient for us to make a finding as to whether the domestic industry is vulnerable to the continuation or recurrence of material injury in the event of revocation of the order.

The information available indicates that the domestic industry's performance was weaker in 2020 than in 2003, 2009, and 2015 with respect to every measure but capacity utilization and the AUV of the industry's U.S. shipments.[138] In 2020, the domestic industry's

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the first six months of 2009 and 2010 showed further improvement. The unit values of the industry's U.S. shipments and net sales generally rose over that period of review, although its costs and selling, general and administrative expenses increased as well. The domestic industry's *** financial performance allowed it to ***. *Confidential First Review Determination*, EDIS Doc. 748679 at 42-43; *First Review Determination*, USITC Pub. 4214 at 29. The Commission pointed to the industry's financial performance at the end of the period of review as evidence for not finding the industry vulnerable to material injury. *First Review Determination*, USITC Pub. 4214 at 29.

[135] *First Review Determination*, USITC Pub. 4214 at 29.

[136] *Second Review Determination*, USITC Pub. 4618 19. The Commission found that the limited information available due to the expedited nature of the review was insufficient to make a finding as to whether the domestic industry was vulnerable to continuation or recurrence of material injury in the event of revocation of the order. *Id.*

[137] *Second Review Determination*, USITC Pub. 4618 at 19. The Commission also found that the continued presence of nonsubject imports after revocation would not preclude subject imports from having a significant effect on the domestic industry that was distinguishable from that of nonsubject imports. *Second Review Determination*, USITC Pub. 4618 at 20.

[138] CR/PR at Table I-4. The domestic industry's production, U.S. shipment volume and value, net sales volume, gross profit, and operating income in 2020 were lower than they were in 2003, 2009, and 2015, although the lower coverage of domestic industry data in this review relative to the prior

capacity was *** MT, production was *** MT, capacity utilization was *** percent, and U.S. shipments were *** MT valued at $***. Its net sales revenue was $***, cost of goods sold was $***, ***. Its operating income as a share of net sales was *** percent.[139]

Based on the information available, we find that revocation of the order would likely lead to a significant volume of subject imports that would significantly undersell the domestic like product. Given the moderately high degree of substitutability between subject imports and the domestic like product, the likely significant increase in low-priced subject imports would force domestic producers to either reduce prices or lose sales. Consequently, the likely significant volume of subject imports and their price effects would negatively affect the domestic industry's capacity, production, capacity utilization, shipments, net sales values and quantities, employment levels, operating income, operating income margins, and capital investments.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports, so as not to attribute injury from other factors to subject imports. Nonsubject imports have increased their share of the U.S. market since the prior proceedings to *** percent in 2020.[140] Nonetheless, the presence of nonsubject imports did not prevent the domestic industry from obtaining a higher AUV for its U.S. shipments in 2020 than in 2003, 2009, and 2015.[141] Moreover, in 2020, the AUV of nonsubject imports was higher than the AUV of the domestic industry's U.S. shipments.[142] Therefore, the record provides no indication that the presence of nonsubject imports would prevent subject imports from adversely affecting the domestic industry's prices or entering the U.S. market in significant volumes upon revocation of the order.[143] Given the moderately high degree of substitutability of the domestic like product and subject imports, any increase in subject import market share would likely come, at least in substantial part, at the expense of the domestic industry. In light of these considerations, we find that any likely effects of nonsubject imports would be distinct from the likely effects attributed to the subject imports.

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proceedings may have contributed to the apparent decline in some of these measures. *See id.* at I-14, Table I-1.

[139] CR/PR at Table I-4.

[140] CR/PR at Table I-6. We also note that the share of nonsubject imports may be overstated relative to prior periods due to the lower coverage of domestic industry production, and thus U.S. shipments, in this review.

[141] CR/PR at Table I-4.

[142] CR/PR at Tables I-4-5.

[143] Although the Commission recently reached a negative determination in *Magnesium from Israel*, Inv. Nos. 701-TA-614 and 731-TA-1431 (Final), USITC Pub. 5009 (Jan. 2020), nonsubject imports from Israel have decreased from 12,933 MT in 2015 to 4,140 MT in 2020. CR/PR at Table I-6.

We have also considered the likely effects of demand trends on the domestic industry. We recognize that apparent U.S. consumption was lower in 2020 than in 2015, due in part to the COVID-19 pandemic.[144] Nevertheless, *** responding purchasers anticipate that U.S. demand for magnesium will increase within a reasonably foreseeable time.[145] Given this, we find that the likely effects of demand trends would be distinct from the likely effects attributed to the subject imports.

Accordingly, we conclude that if the antidumping duty order on alloy magnesium from China were revoked, subject imports would likely have a significant impact on the domestic industry within a reasonably foreseeable time.

IV. Conclusion

For the above reasons, we determine that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

[144] CR/PR at Table I-6; Response at 28. We note that apparent U.S. consumption in 2020 may be understated relative to that in 2015 due to the lower coverage of domestic industry production, and thus U.S. shipments, in this review as compared to the second review. *See* CR/PR at I-14, Table I-1.

[145] CR/PR at D-6-8 (responses by ***).

Information obtained in this review

Background

On June 1, 2021, the U.S. International Trade Commission ("Commission") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted a review to determine whether revocation of the antidumping duty order on magnesium from China would likely lead to the continuation or recurrence of material injury to a domestic industry.[2] All interested parties were requested to respond to this notice by submitting certain information requested by the Commission.[3] [4] The following tabulation presents information relating to the background and schedule of this proceeding:

Effective date	Action
June 1, 2021	Notice of initiation by Commerce (86 FR 29239, June 1, 2021)
June 1, 2021	Notice of institution by Commission (86 FR 29280, June 1, 2021)
September 7, 2021	Scheduled date for Commission's vote on adequacy
September 29, 2021	Scheduled date for Commerce's results of its expedited review
October 29, 2021	Commission's statutory deadline to complete expedited review
May 27, 2022	Commission's statutory deadline to complete full review

[1] 19 U.S.C. 1675(c).

[2] *Magnesium From China; Institution of a Five-Year Review*, 86 FR 29280, June 1, 2021. In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of a five-year review of the subject antidumping duty orders. *Initiation of Five-Year ("Sunset") Review*, 86 FR 29239, June 1, 2021. Pertinent Federal Register notices are referenced in app. A, and may be found at the Commission's website (www.usitc.gov).

[3] As part of their response to the notice of institution, interested parties were requested to provide company-specific information. That information is presented in app. B. Summary data compiled in the original investigations and subsequent full reviews are presented in app. C.

[4] Interested parties were also requested to provide a list of three to five leading purchasers in the U.S. market for the domestic like product and the subject merchandise. Presented in app. D are the responses received from purchaser surveys transmitted to the purchasers identified in this proceeding.

Responses to the Commission's notice of institution

Individual responses

The Commission received one[5] submission in response to its notice of institution in the subject review. It was filed on behalf of the following entities:

> US Magnesium LLC ("US Magnesium"), a domestic producer of magnesium, and The United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, Local 8319 ("Local 8319"). Local 8319 represents workers producing magnesium metal in US Magnesium's plant in Rowley, Utah (collectively referred to herein as "domestic interested parties").

A complete response to the Commission's notice of institution requires that the responding interested parties submit to the Commission all the information listed in the notice. Responding firms are given an opportunity to remedy and explain any deficiencies in their responses. A summary of the number of responses and estimates of coverage for each is shown in table I-1. The Commission did not receive any responses from Chinese producers, exporters, or importers of the subject merchandise from China.

Table I-1
Magnesium: Summary of completed responses to the Commission's notice of institution

Interested party	Type	Number of firms	Coverage
U.S. producer	Domestic	1	***%[1]

[1] The coverage figure represents US Magnesium's estimate of primary and secondary magnesium ingot produced in the United States. Although US Magnesium believes die casters, which recycle their own scrap, should not be considered producers of the domestic like product, it has included an estimate of die casters' recycled product in estimated total production. If die casters are included in the calculation, US Magnesium estimates that it accounts for approximately *** percent of U.S. production of magnesium. It estimates that it would account for *** percent if the industry were defined to exclude die casters.

Note: The U.S. producer coverage figure presented is the domestic interested parties' estimate of its share of total U.S. production of magnesium during 2020. Domestic interested parties' response to the notice of institution, July 1, 2021, pp. 15 and 26.

[5] The Commission received a comment from the North American Die Casting Association (NADCA) on July 1, 2021 in support of conducting a full review of the order.

Party comments on adequacy

The Commission received party comments on the adequacy of responses to the notice of institution and whether the Commission should conduct expedited or full reviews from the domestic interested parties. The domestic interested parties request that the Commission conduct an expedited review of the antidumping duty order on magnesium.[6]

The original investigations and subsequent reviews

The original investigations

The original investigations resulted from petitions filed on February 27, 2004, with Commerce and the Commission by US Magnesium Corp., Salt Lake City, Utah; the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, Local 8319 ("Local 8319"), Salt Lake City, Utah and the Glass, Molders, Pottery, Plastics & Allied Workers International, Local 374 ("Local 374"), Long Beach, California.[7] The original petitions included not only alloy magnesium from China, but also pure and alloy magnesium from Russia. On February 24, 2005, Commerce determined that imports of magnesium from China were being sold at less than fair value ("LTFV").[8] The Commission determined on April 4, 2005 that the domestic industry was materially injured by reason of LTFV imports of magnesium from China and Russia.[9] On April 15, 2005, Commerce issued its antidumping duty orders on China and Russia with the final weighted-average dumping margins ranging from 49.66 to 141.49 percent for China.[10]

[6] Domestic interested parties' comments on adequacy, August 13, 2021, p. 2.

[7] Magnesium from China, Inv. Nos. 731-TA-1071-1072 (Final), USITC Publication 3763, April 2005 ("Original publication"), p. I-1.

[8] 70 FR 9037, February 24, 2005, China, affirmative; critical circumstances.

[9] 70 FR 19969, April 15, 2005.

[10] 70 FR 19928, April 15, 2005. 70 FR 19930. In the preliminary determination, the Commission determined that the following companies were collapsed members of the RSM group of companies for the purposes of this investigation: Nanjing Yunhai Special Metals Co., Ltd. (''Yunhai Special''), Nanjing Welbow Metals Co., Ltd. (''Welbow''), Nanjing Yunhai Magnesium Co., Ltd. (''Yunhai Magnesium''), Shanxi Wenxi Yunhai Metals Co., Ltd. (''Wenxi Yunhai'').

The first five-year reviews

On June 4, 2010 the Commission determined that it would conduct full reviews of the antidumping duty orders on magnesium from China and Russia.[11] On July 7, 2010, Commerce determined that revocation of the antidumping duty orders on magnesium from China and Russia would likely to lead to continuation or recurrence of dumping.[12] On February 24, 2011, the Commission determined that revocation of the antidumping duty order on magnesium from China would likely lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time. The Commission also determined that revocation of the antidumping duty order on pure and alloy magnesium from Russia would not likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[13] Following affirmative determinations in the five-year reviews by Commerce and the Commission regarding China, effective March 11, 2011, Commerce issued a continuation of the antidumping duty order on imports of magnesium from China.[14] Following the Commission's negative determination in the five-year review regarding Russia, effective April 15, 2010, Commerce issued a revocation of the antidumping duty order on imports of magnesium from Russia.[15]

The second five-year review

On May 17, 2016, the Commission determined that it would conduct an expedited review of the antidumping duty order on magnesium from China.[16] On June 8, 2016, Commerce determined that revocation of the antidumping duty order on alloy magnesium ("magnesium") from China would likely lead to continuation or recurrence of dumping.[17] On June 30, 2016, the Commission determined that material injury would be likely to continue or recur within a reasonably foreseeable time.[18] Following affirmative determinations in the five-year reviews by Commerce and the Commission, effective July 21, 2016, Commerce issued a continuation of the antidumping duty order on imports of magnesium from China.[19]

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[11] 75 FR 35086, June 21, 2010.
[12] 75 FR 38983, July 7, 2010.
[13] 76 FR 11813, March 3, 2011.
[14] 76 FR 13356, March 11, 2011.
[15] 76 FR 13128, March 10, 2011.
[16] 81 FR 32346, May 23, 2016.
[17] 81 FR 36874, June 8, 2016.
[18] 81 FR 44328, July 7, 2016.
[19] 81 FR 47351, July 21, 2016.

Previous and related investigations

The Commission has conducted several previous import relief investigations on magnesium or similar merchandise. Table I-2 presents data on previous and related title VII investigations. At this time, antidumping duty orders are in place on two cases for China.

Table I-2
Magnesium: Previous and related Commission proceedings and status of orders

Date	Number(s)	Countr(ies)	Determination	Current status of order
1991	731-TA-528	Canada	Affirmative	Order revoked after first five-year review, 2004
1991	701-TA-309	Canada	Affirmative	Order revoked after second five-year review, 2006
1994	731-TA-696	China	Affirmative	Order continued after fourth five-year review, 2017
2000	731-TA-895	China	Affirmative	Order continued after fifth five-year review, 2018
2004	731-TA-1071	China	Affirmative	Ongoing third five-year review
2000	701-TA-403	Israel	Negative	--
2000	731-TA-896	Israel	Negative	--
2018	701-TA-614	Israel	Negative	--
2018	731-TA-1431	Israel	Negative	--
1991	731-TA-529	Norway	Negative	--
1991	701-TA-310	Norway	Negative	--
1994	731-TA-697	Russia	Affirmative	Order revoked after first five-year review, 2000
2000	731-TA-897	Russia	Negative	--
2004	731-TA-1072	Russia	Affirmative	Order revoked after first five-year review, 2011
1994	731-TA-698	Ukraine	Affirmative	Order revoked after remand proceedings, 1999

Source: U.S. International Trade Commission publications and Federal Register notices.

Note: “Date” refers to the year in which the investigation or review was instituted by the Commission.

Commerce's five-year review

Commerce announced that it would conduct an expedited review with respect to the order on imports of magnesium from China with the intent of issuing the final results of its review based on the facts available no later than September 29, 2021.[20] Commerce publishes its Issues and Decision Memoranda and its final results concurrently, accessible upon publication at http://enforcement.trade.gov/frn/. Issues and Decision Memoranda contain complete and up-to-date information regarding the background and history of the order, including scope rulings, duty absorption, changed circumstances reviews, and anticircumvention, as well as any decisions that may have been pending at the issuance of this report. Any foreign producers/exporters that are not currently subject to the antidumping duty order on imports of magnesium from China are noted in the sections titled "The original investigation" and "U.S. imports," if applicable.

The product

Commerce's scope

Commerce has defined the scope as follows:

> *The merchandise covered by the order is magnesium metal from the PRC, which includes primary and secondary alloy magnesium metal, regardless of chemistry, raw material source, form, shape, or size. Magnesium is a metal or alloy containing by weight primarily the element magnesium. Primary magnesium is produced by decomposing raw materials into magnesium metal. Secondary magnesium is produced by recycling magnesium-backed scrap into magnesium metal. The magnesium covered by this investigation includes blends of primary and secondary magnesium. The subject merchandise includes the following alloy magnesium metal products made from primary and/or secondary magnesium including, without limitation, magnesium cast into ingots, slabs, rounds, billets, and other shapes, magnesium ground, chipped, crushed, or machined into raspings, granules, turnings, chips, powder, briquettes, and other shapes; and products that contain 50 percent or*

[20] Letter from Alex Villanueva, Senior Director, AD/CVD Operations, Enforcement and Compliance, U.S. Department of Commerce to Nannette Christ, Director of Investigations, July 22, 2021.

greater, but less than 99.8 percent, magnesium, by weight, and that have been entered into the United States as conforming to an ''ASTM Specification for Magnesium Alloy'' 5 and are thus outside the scope of the existing antidumping orders on magnesium from the PRC (generally referred to as ''alloy'' magnesium).

The scope of this order excludes: (1) All forms of pure magnesium, including chemical combinations of magnesium and other material(s) in which the pure magnesium content is 50 percent or greater, but less than 99.8 percent, by weight, that do not conform to an ''ASTM Specification for Magnesium Alloy''; 6 (2) magnesium that is in liquid or molten form; and (3) mixtures containing 90 percent or less magnesium in granular or powder form by weight and one or more of certain non-magnesium granular materials to make magnesium-based reagent mixtures, including lime, calcium metal, calcium including lime, calcium metal, calcium silicon, calcium carbide, calcium carbonate, carbon, slag coagulants, fluorspar, nephaline syenite, feldspar, alumina (Al203), calcium aluminate, soda ash, hydrocarbons, graphite, coke, silicon, rare earth metals/mischmetal, cryolite, silica/fly ash, magnesium oxide, periclase, ferroalloys, dolomite lime, and colemanite.[21]

U.S. tariff treatment

Alloy magnesium is provided for in HTS subheading 8104.19.00, covering unwrought magnesium containing less than 99.8 percent by weight of that material. To be treated as an alloy for tariff purposes, the content of the named base metal must be, by weight, less than 99 percent, but not less than any other metallic element. Products of China comprising either unwrought pure magnesium in ingot form (HTS subheading 8104.11.00) or magnesium in granular form (HTS subheading 8104.30.00) are currently subject to separate antidumping duty orders[22] and are not part of this current five-year review of the order on alloy magnesium from

[21] 81 FR 47351, July 21, 2016.

[22] *Notice of Antidumping Duty Orders: Pure Magnesium From the People's Republic of China, the Russian Federation and Ukraine; Notice of Amended Final Determination of Sales at Less Than Fair Value: Antidumping Duty Investigation of Pure Magnesium From the Russian Federation*, 60 FR 25691, May 12, 1995; and *Antidumping Duty Order: Pure Magnesium in Granular Form From the People's Republic of China*, 66 FR 57936, November 19, 2001.

China.[23] Alloy magnesium originating in China and imported into the U.S. market has a column 1-general duty rate of 6.5 percent ad valorem.[24] Such alloy magnesium is not subject to an additional ad valorem duty under Section 301 of the Trade Act of 1974, as amended,[25] nor an additional national security import duty under Section 232 of the Trade Expansion Act of 1962, as amended.[26] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Description and uses[27]

Magnesium, the eighth most abundant element in the earth's crust and the third most plentiful element dissolved in seawater, is a silver-white metallic element. It is the lightest of all structural metals with a density approximately 63 percent of that of aluminum, the principal metal with which it competes in the U.S. market. Magnesium's light weight and high vibrational-dampening properties have encouraged research to develop magnesium-based alloys with improved physical and mechanical properties for use as a structural metal in applications where minimizing weight is an important design consideration. Magnesium is available in two principal forms— pure[28] and alloy.

[23] The antidumping duty orders on pure magnesium include "off-specification" pure magnesium (alloy magnesium that contains 50 percent or greater but less than 99.8 percent magnesium by weight, that does not conform to an ASTM specification for alloy magnesium).

[24] HTSUS (2021) Basic Revision 7, USITC Publication 5224, August 2021, pp. 81-4.

[25] Section 301 of the Trade Act, as amended (19 U.S.C. § 2411) authorizes the Office of the United States Trade Representative ("USTR"), at the direction of the President, to take appropriate action to respond to a foreign country's unfair trade practices. Following investigations into "China's acts, policies, and practices related to technology transfer, intellectual property, and innovation" (82 FR 40213, August 24, 2017), USTR published its determination, on April 6, 2018, that the acts, policies, and practices of China under investigation are unreasonable or discriminatory and burden or restrict U.S. commerce, and are thus actionable under section 301(b) of the Trade Act (83 FR 14906, April 6, 2018).

[26] Section 232 of the Trade Expansion Act of 1962, as amended (19 U.S.C. §1862), authorizes the President, on advice of the Secretary of Commerce, to adjust the imports of an article and its derivatives that are being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security. Adjusting Imports of Steel Into the United States, Presidential Proclamation 9705, March 8, 2018 (83 FR 11625, March 15, 2018).

[27] Unless otherwise noted, this information is based on Alloy Magnesium from China, Investigation No. 731-TA-1071 (Second review), USITC Publication 4618, June 2016 (Second review publication), pp. I-6 – I-11.

[28] Unless otherwise noted, the term "pure magnesium" consists of pure magnesium ingot and pure granular magnesium.

Pure magnesium in unwrought form[29] contains at least 99.8 percent magnesium by weight.[30] Pure magnesium is widely used in commercial and industrial applications because it is easily machined and lightweight, has a high strength-to-weight ratio, and has special chemical and electrical properties. Pure magnesium also has special metallurgical and chemical properties that allow it to alloy well with other metals, such as aluminum. Pure magnesium is typically used in the production of aluminum alloys for use in beverage cans, in die cast automotive parts, in iron and steel desulfurization, as a reducing agent for various nonferrous metals (titanium, zirconium, hafnium, uranium, and beryllium), and in magnesium anodes for the protection of iron and steel in underground pipe and water tanks and various marine applications. Pure magnesium is also used in the production of titanium sponge, which is a precursor metal product in the production of titanium metal products for use in aerospace, medical, and industrial applications.

Alloy magnesium ("magnesium alloy") consists of magnesium and other metals, typically, aluminum and zinc, containing less than 99.8 percent magnesium by weight but more than 50 percent, with magnesium the largest metallic element in the alloy by weight. Alloy magnesium is typically produced to meet various industry-recognized American Society for Testing and Materials ("ASTM") specifications for alloy magnesium such as AM50A, AM60B, and AZ91D.[31] It is principally used in structural applications, primarily in castings (die, permanent mold, and sand) and extrusions for the automotive industry. Alloy magnesium has certain properties that improve its strength, ductility, workability, corrosion resistance, density, or castability compared to pure magnesium. By contrast, pure magnesium is not used in structural applications because its tensile and yield strengths are low.

Magnesium can also be classified based on its production method—primary or secondary.

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[29] "Unwrought" magnesium is pure magnesium that has not been worked in any way. "Wrought" magnesium is magnesium that has been worked into a desired shape, for example the working of magnesium to produce extrusions, rolled product, forgings, etc. Wrought magnesium is not within the scope of this review.

[30] Ultra-high purity ("UHP") magnesium is unwrought magnesium containing at least 99.95 percent magnesium by weight and is used as a reagent in the pharmaceutical and chemical industries. Commodity-grade pure magnesium is unwrought magnesium containing at least 99.8 percent magnesium but less than 99.95 percent magnesium by weight and is most commonly used in the aluminum alloying industry.

[31] The ASTM specifications designate the chemical composition of the alloy. The first two letters designate the two alloying elements most prevalent in the alloy (e.g., "A" for aluminum, "M" for manganese, or "Z" for zinc), while the numbers represent the percent of other elements contained in the alloy, by weight. For example, AZ91D contains 9 percent aluminum, 1 percent zinc, and 90 percent magnesium.

Primary magnesium is magnesium produced by decomposing raw materials into magnesium metal.

Secondary magnesium is pure or alloy magnesium that is produced by recycling magnesium-based scrap. Magnesium scrap is typically separated into two categories: old scrap and new scrap.

Old scrap becomes available to producers of secondary magnesium when durable and nondurable consumer products are discarded from various end-uses, such as packaging, building and construction, automobiles, electrical, and machinery and equipment.

New scrap is metal that never reaches the consumer. Rather, the scrap is generated from wrought and cast products as they are processed by fabricators into consumer or industrial products. **Home scrap** is new scrap that is recycled within the company that generated it and consequently, seldom enters the commercial secondary magnesium market. **Prompt industrial scrap** is new scrap from a fabricator that does not choose to or is not equipped to recycle the scrap. This scrap then enters the secondary magnesium market. New scrap may include solids, clippings, stampings, and cuttings; borings and turnings that are generated during machining operations; and melt residues, such as skimmings, drosses, spillings, and sweepings.

Granular magnesium consists of all physical forms of unwrought magnesium other than ingots, such as raspings, turnings, granules, and powders.[32] Granular magnesium is typically used in the production of magnesium-based desulfurizing reagent mixtures that are used in the steelmaking process to reduce the sulfur content of steel.[33] Lesser amounts of granular magnesium are used in defense applications, such as military ordnance and flares.

[32] Granular magnesium may be either pure or alloy magnesium. However, based on information obtained in previous proceedings on granular magnesium from China, granular magnesium is typically pure magnesium or "off-specification pure" magnesium (alloy magnesium not meeting ASTM specifications for alloy magnesium).

[33] U.S. grinders typically sell three different steel desulfurization blends: (1) containing 90 percent pure magnesium powder and 10 percent lime; (2) containing 25 percent magnesium and 75 percent lime; and (3) containing 8-10 percent magnesium with the remainder lime and calcium carbonate. Fluorspar and a fluidizer are also incorporated in these products.

Manufacturing process[34]

Primary magnesium

Worldwide, most magnesium is derived from magnesium-bearing ores (dolomite, magnesite, brucite, and olivine) or seawater and well-water and lake brines.[35] Large deposits of dolomite are widely distributed throughout the world, and dolomite is the principal magnesium-bearing ore found in the United States. Magnesium-bearing ores are mined by the open-pit method. US Magnesium produces primary magnesium from the extraction of magnesium from brines of the surface waters of the Great Salt Lake in Utah, while former U.S. producer Northwest Alloys used dolomite in its process.[36]

Magnesium metal is normally produced by either an electrolytic process or a silicothermic process, with the electrolytic process dominating in terms of the volume of United States and world production. The silicothermic process (also known as the Pidgeon process) is used by a majority of the largest producers in China.[37]

US Magnesium uses the electrolytic method to produce magnesium. A schematic diagram of US Magnesium's production process is presented in figure I-1. In the electrolytic process, seawater or brine is evaporated and treated to produce a concentrated solution of magnesium chloride, which is further concentrated and dried to yield magnesium chloride powder. The powder is then melted, further purified, and fed into electrolytic cells operating at 700 degrees Celsius. Direct electrical current is sent through the cells to break down the magnesium chloride into chlorine gas and molten magnesium metal.[38] The metal rises to the surface where it is guided into storage wells and cast into ingots.

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[34] Unless otherwise noted, this information is based on second review publication, pp. I-8 – I-11.

[35] The magnesium content of magnesium-bearing ores typically ranges from nearly 22 percent for dolomite to 69 percent for brucite. The magnesium content of seawater is 0.13 percent, which is much lower than that of the lowest grade of magnesium ore deposits; however, seawater has the advantage of being abundant, accessible, and extremely uniform in its magnesium content, allowing for easier standardization of the refining process.

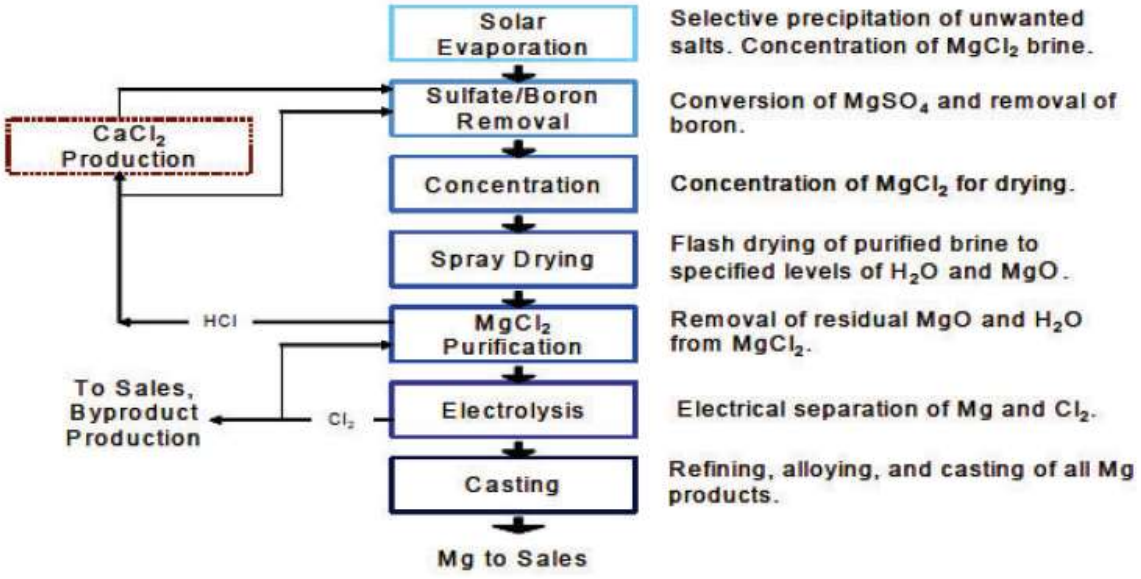
[36] Northwest Alloys ceased production of magnesium in October 2001. MagPro began primary production of pure magnesium ingot in 2009.

[37] The raw material source for silicothermic production in China is dolomite ($MgCO_3 \bullet CaCO_3$).

[38] The electrolytic cells must be kept in constant operation. If they are shut down, a "refractory lining" requires rebuilding, which is costly and time consuming.

Figure I-1:

Magnesium: Schematic diagram of US Magnesium's production process flow chart



Source: Alloy Magnesium from China, Investigation Nos. 731-TA-1071 (Second review), USITC Publication 4618, June 2016 (Second review publication), p. I-9.

Once the electrolytic or silicothermic reduction of magnesium is completed, the manufacturing processes used for the production of both pure and alloy magnesium ingot are very similar. In the U.S. facility that produces both pure magnesium and alloy magnesium (US Magnesium's facility), the same production workers work on both lines.

Both primary pure magnesium and primary alloy magnesium begin with the production of liquid pure magnesium. The liquid pure magnesium is either cast directly into pure magnesium ingots or is alloyed by the addition of alloying elements (typically aluminum and zinc) and scrap magnesium and then cast to produce alloy magnesium ingots.

Primary magnesium is typically cast into ingots or slabs. Aluminum producers typically purchase larger pure cast shapes such as rounds, billets, peg-lock ingots, or T-shapes. Producers of magnesium powder for steel desulfurization applications typically purchase smaller ingots or magnesium "chips" that are then ground into powder[39] and used internally to produce magnesium-based reagent mixtures or, to a lesser extent, pyrotechnic products. Die casters can purchase ingots and granular primary alloy magnesium for use in magnesium alloy castings,

[39] Magnesium chips are ground into powder using a particle reduction process. Magnesium powder can also be produced by atomization of molten pure magnesium; however, this technique is less frequently used than grinding.

and/or recycle scrap magnesium generated in their die casting operations into secondary alloy magnesium.

Magnesium, in a molten or ingot form, is also used in the production of titanium sponge, which is a precursor metal product in the production of titanium metal products. In the Kroll reduction process, titanium sponge results from the reduction of titanium tetrachloride ($TiCl_4$) with magnesium. The titanium tetrachloride is reacted in a molten pool of magnesium metal in which the temperature and composition of the mixture are carefully controlled. Along with pure titanium metal sponge, molten magnesium chloride (resulting from magnesium reacting with the titanium tetrachloride liquid) is a product of the reaction. The magnesium chloride can be further refined back to pure magnesium in an electrolytic cell. The electrolytic cell separates the magnesium metal from the chlorine which is also collected for sale. All titanium tetrachloride producers use chlorine gas in the production of titanium tetrachloride.

Secondary magnesium

Secondary magnesium is produced from recycling magnesium-based "scrap."[40] Magnesium scrap arrives at the recycler either in a loose form or contained in boxes. After the magnesium is separated from other alloys by the recycler, the sorted magnesium is heated in a steel crucible to nearly 675 degrees Celsius. Alloying elements such as aluminum, manganese, or zinc can then be added to the liquid magnesium and the alloyed magnesium can then be transferred to ingot molds by hand ladling, pumping, or tilt pouring. Magnesium scrap can also be generated by the direct grinding of scrap into powder for iron and steel desulfurization applications. Finally, recycled alloy magnesium contained in used aluminum beverage cans typically remains with the recycled can since virtually all aluminum beverage can scrap is melted and converted into body stock and then converted into new aluminum beverage cans.[41]

[40] Magnesium-based scrap is typically divided into one of two categories (old and new). Old magnesium-based scrap consists of postconsumer scrap such as automotive parts, helicopter parts, lawnmower decks, and used tools. Old magnesium-based scrap is sold to scrap processors. New magnesium-based scrap typically falls into one of four types. Type I is high-grade scrap recovered from die casting operations and uncontaminated with oils. Types II, III, and IV are lower grade scraps, typically either oil-contaminated scrap; dross from magnesium-processing operations; or chips and fines. Type I scrap is either reprocessed at the die casting facility or sold to a scrap processor. The other types of scrap are either used directly in steel desulfurization applications (chips and fines) or sold to scrap processors.

[41] Aluminum beverage can manufacturers are sensitive to the presence of beryllium in melted scrap. Therefore, these firms generally do not purchase recycled alloy magnesium produced from scrap.

"Off-specification" pure magnesium

"Off-specification" pure magnesium is pure primary magnesium containing magnesium scrap, secondary magnesium, oxidized magnesium, or impurities (whether or not intentionally added) that cause the primary magnesium content to fall below 99.8 percent by weight. "Off-specification" pure magnesium products contain 50 percent or greater, but less than 99.8 percent primary magnesium, by weight, do not conform to ASTM specifications for alloy magnesium, and generally do not contain individually or in combination, 1.5 percent or more, by weight, of the following alloying elements: aluminum, manganese, zinc, silicon, thorium, zirconium, and rare earths. The Commission reported in its full first five-year reviews that no U.S. producers reported producing "off-specification" pure magnesium.[42]

The industry in the United States

U.S. producers

During the final phase of the original investigations, the Commission received U.S. producer questionnaires from six firms, which accounted for approximately *** percent of production of magnesium in the United States during 2003.[43] During the first five-year reviews, the Commission received U.S. producer questionnaires from eight firms, which accounted for approximately *** percent of production of magnesium in the United States during 2009.[44] During the second five-year review, domestic interested parties provided a list of ten known and currently operating U.S. producers of magnesium. One firm providing data in response to the Commission's notice of institution accounted for an estimated *** percent of magnesium production in the United States during 2015.[45]

In response to the Commission's notice of institution in this current review, the domestic interested parties provided a list of seven known and currently operating U.S. producers of magnesium.[46]

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[42] Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review), USITC Publication 4214, February 2011 ("First review publication"), pp. I-25. Typically, producers do not set out to produce "off-specification" pure magnesium. Rather, its production results from starting or re-starting the primary magnesium production process or is the result of some malfunction in the production process.

[43] Original confidential report, p. III-2.

[44] First review confidential report, p. I-53.

[45] Second review confidential report, p. I-26 & Table I-1.

[46] Domestic Interested Parties' Response to the Notice of Institution, p. I-25.

Recent developments

Since the Commission's last five-year review, the following developments have occurred in the magnesium alloy industry.

Table I-3 presents events in the U.S. industry since the last five-year reviews.

Table I-3
Magnesium: Recent developments in the U.S. industry

Item	Firm	Event
Contraction	US Magnesium	Current market conditions have caused US Magnesium to sharply reduce its capital spending and curtail its current production levels. If market conditions improved sufficiently, US Magnesium could restore meaningful capacity in 6-8 weeks.
Fire	Magpro LLC	In 2018 a large fire broke out at the Camden, Tennessee magnesium recycling plant.
Expansion	MagReTech LLC	Construction finished in 2018 on an expansion facility in Bellevue, Ohio, that grew production output and the number of employees for this magnesium recycler that also supplies secondary magnesium ingot completely made of scrap.
Acquisition	Luxfer Holdings PLC	Acquired ESM Group in mid-November 2017 and their Saxonburg, Pennsylvania plant, which manufactures a range of magnesium-based chips, granules, ground powders and atomized powders.
Plant Closing	Luxfer Holdings PLC	After the acquisition of the Saxonburg plant, Luxfer closed its Riverhead, New York plant that made magnesium-based heating pads in early 2018.
Expansion	Spartan Light Metal Products, Inc.	Broke ground on a new 135k square foot stand-alone die cast manufacturing facility in Mexico, Missouri in 2018.

Source: Domestic interested party's response to the notice of institution, July 1, 2021, pp. 26-27; Morris, Chuck, "Fire reported at Camden magnesium recycling plant," WSMV Nashville, April 20, 2018, https://www.wsmv.com/news/fire-reported-at-camden-magnesium-recycling-plant/article_6877fa5a-8dbf-525a-8d71-8ee298f606c0.html, retrieved July 26, 2021; "MagReTech: About Us," https://magretech.us/site/aboutus, retrieved July 26, 2021; "Luxfer Enters into Agreement to Acquire ESM Group's Specialty Metals Business," Businesswire, November 14, 2017, https://www.businesswire.com/news/home/20171114006655/en/Luxfer-Enters-into-Agreement-to-Acquire-ESM-Group%E2%80%99s-Specialty-Metals-Business, retrieved July 26, 2021; Siford, Rachel, "BNL and Luxfer Magtech have major layoffs in Riverhead area," Riverhead News-Review, December 12, 2017, https://riverheadnewsreview.timesreview.com/2017/12/84573/bnl-luxfer-magtech-major-layoffs/, retrieved July 26, 2021; Spartan Light Metal Products News Release, August 21, 2018, http://www.spartanlmp.com/2018-09-05-Spartan-Expansion-Groundbreaking.pdf, retrieved July 26, 2021.

U.S. producers' trade and financial data

The Commission asked domestic interested parties to provide trade and financial data in their response to the notice of institution in the current five-year review.[47] Table I-4 presents a compilation of the trade and financial data submitted from all responding U.S. producers in the original investigations and subsequent five-year reviews.

Table I-4
Magnesium: Trade and financial data submitted by U.S. producers, by period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric ton; ratio is in percent

Item	Measure	2003	2009	2015	2020
Capacity	Quantity	***	***	***	***
Production	Quantity	***	***	***	***
Capacity utilization	Ratio	***	***	***	***
U.S. shipments	Quantity	***	***	***	***
U.S. shipments	Value	***	***	***	***
U.S. shipments	Unit value	***	***	***	***
Net sales	Value	***	***	***	***
COGS	Value	***	***	***	***
COGS to net sales	Ratio	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***
SG&A expenses	Value	***	***	***	***
Operating income or (loss)	Value	***	***	***	***
Operating income or (loss) to net sales	Ratio	***	***	***	***

Source: For the years 2003 / 2009 / 2015, data are compiled using data submitted in the original investigations and subsequent reviews. For the year 2020, data are compiled using data submitted by the domestic interested parties. Domestic interested parties' response to the notice of institution, July 1, 2021, p. 27.

Note: For a discussion of data coverage, please see "U.S. producers" section.

Definitions of the domestic like product and domestic industry

The domestic like product is defined as the domestically produced product or products which are like, or in the absence of like, most similar in characteristics and uses with, the subject merchandise. The domestic industry is defined as the U.S. producers as a whole of the

[47] Individual company trade and financial data are presented in app. B.

domestic like product, or those producers whose collective output of the domestic like product constitutes a major proportion of the total domestic production of the product. Under the related parties provision, the Commission may exclude a U.S. producer from the domestic industry for purposes of its injury determination if "appropriate circumstances" exist.[48]

In its original determination, the Commission majority defined the domestic like product to include pure and alloy magnesium, primary and secondary magnesium, and ingot (cast) and granular magnesium. In its full first five-year review and expedited second five-year review determinations, the Commission again defined the domestic like product to include pure and alloy magnesium, primary and secondary magnesium, and ingot (cast) and granular magnesium.[49]

U.S. imports

U.S. importers

During the final phase of the original investigation, the Commission received U.S. importer questionnaires from 18 firms, which accounted for approximately *** percent of total U.S. imports of alloy magnesium from China during 2003.[50] Import data presented in the original investigation are based on official Commerce questionnaire statistics. During the first five-year review, the Commission received U.S. importer questionnaires from 16 firms, which accounted for approximately 266.2 percent of total U.S. imports of alloy magnesium from China during 2009.[51] Import data presented in the first review are based on official Commerce questionnaire statistics. During the second five-year review, the Commission received U.S. importer questionnaires from 3 firms, which accounted for less than *** percent of total U.S. imports of alloy magnesium from China during 2015.[52] Import data presented in the second review are based on official Commerce statistics. Although the Commission did not receive responses from any respondent interested parties in this current review, in its response to the Commission's notice of institution, the domestic interested party provided a list of 2 potential U.S. importers of magnesium.[53]

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[48] Section 771(4)(B) of the Tariff Act of 1930, 19 U.S.C. § 1677(4)(B).

[49] Alloy Magnesium from China, Inv. No. 731-TA-1071 (Second Review), USITC Publication 4618, June 2016 ("Original publication"), pp. 6-7.

[50] Original confidential report, p. IV-4.

[51] First review confidential report, p. I-59, and USITC Publication 4214, p. IV-1.

[52] Second review confidential report, p. I-31.

[53] Domestic interested parties' response to the notice of institution, July 1, 2021, Attachment 9.

U.S. imports

Table I-5 presents the quantity, value, and unit value of U.S. imports from China as well as the other top sources of U.S. imports.

Table I-5
Magnesium: U.S. imports, by source and period

Quantity in metric tons; value in 1,000 dollars; unit value in dollars per metric tons

U.S. imports from	Measure	2016	2017	2018	2019	2020
China (alloy)	Quantity	9	0	183	51	53
Subject sources	Quantity	9	0	183	51	53
Taiwan	Quantity	2,230	1,261	920	4,209	6,374
Russia	Quantity	1,870	5,397	3,273	4,206	4,785
Israel	Quantity	11,335	11,450	10,664	5,956	4,140
Germany	Quantity	1,093	473	1,844	1,879	1,843
Austria	Quantity	370	423	579	523	1,707
Canada	Quantity	2,559	2,219	2,044	1,701	1,312
United Kingdom	Quantity	690	693	869	888	665
China (pure)	Quantity	860	801	420	149	31
Turkey	Quantity	347	581	1,749	348	0
All other sources	Quantity	2,014	1,200	992	3,059	7,595
Nonsubject sources	Quantity	23,368	24,497	23,354	22,919	28,451
All import sources	Quantity	23,377	24,497	23,537	22,969	28,504
China (alloy)	Value	33	0	1,033	198	174
Subject sources	Value	33	0	1,033	198	174
Taiwan	Value	6,220	3,693	2,886	14,317	21,023
Russia	Value	5,468	15,732	9,947	14,330	20,008
Israel	Value	47,586	44,668	40,062	25,221	32,517
Germany	Value	3,780	1,734	6,095	7,078	8,864
Austria	Value	1,811	2,182	2,747	2,610	6,674
Canada	Value	6,552	5,878	5,665	5,221	4,301
United Kingdom	Value	13,608	11,527	14,338	15,646	10,757
China (pure)	Value	1,865	2,064	1,065	484	122
Turkey	Value	1,151	1,664	5,771	11,679	41,264
All other sources	Value	8,348	4,226	3,719	11,240	28,012
Nonsubject sources	Value	96,388	93,367	92,295	107,826	173,542
All import sources	Value	96,422	93,367	93,328	108,024	173,715
China (alloy)	Unit value	3,667	n.a.	5,649	3,912	3,285
Subject sources	Unit value	3,667	n.a.	5,649	3,912	3,285

Table continued.

Table I-5--Continued
Magnesium: U.S. imports, by source and period

U.S. imports from	Measure	2016	2017	2018	2019	2020
Taiwan	Unit value	2,789	2,929	3,136	3,402	3,299
Russia	Unit value	2,925	2,915	3,039	3,407	4,182
Israel	Unit value	4,198	3,901	3,757	4,234	7,855
Germany	Unit value	3,459	3,668	3,305	3,767	4,808
Austria	Unit value	4,888	5,163	4,741	4,989	3,909
Canada	Unit value	2,560	2,649	2,772	3,069	3,278
United Kingdom	Unit value	19,729	16,636	16,495	17,627	16,184
China (pure)	Unit value	2,168	2,576	2,535	3,251	3,902
Turkey	Unit value	3,316	2,863	3,301	33,536	n.a.
All other sources	Unit value	4,145	3,521	3,748	3,674	3,688
Nonsubject sources	Unit value	4,125	3,811	3,952	4,705	6,100
All import sources	Unit value	4,125	3,811	3,965	4,703	6,094

Source: Compiled from official Commerce statistics for HTS subheadings 8104.11.00, 8104.19.00, 8104.30.00, accessed August 5, 2021.

Note: Because of rounding, figure may not add to total shown; Subject imports from China in this table consist of magnesium imported under HTS subheading 8104.19.00. Non-subject imports from China consist of magnesium imported under HTS subheading 8104.11.00 and 8104.30.00. All other non-subject imports are HTS subheadings 8104.11.00, 8104.19.00 and 8104.30.00.

Apparent U.S. consumption and market shares

Table I-6 presents data on U.S. producers' U.S. shipments, U.S. imports, apparent U.S. consumption, and market shares.

Table I-6
Magnesium: Apparent U.S. consumption and market shares, by source and period

Quantity in metric tons; value in 1,000 dollars; share of quantity is the share of apparent U.S. consumption by quantity in percent; share of value is the share of apparent U.S. consumption by value in percent

Source	Measure	2003	2009	2015	2020
U.S. producers	Quantity	***	***	***	***
China[1] (alloy)	Quantity	12,906	142	([2])	53
Russia	Quantity	21,745	315	([3])	([3])
Subject sources	Quantity	34,651	457	0	53
Canada	Quantity	24,956	733	2,794	1,312
China (pure)	Quantity	101	4,968	4,045	31
Russia	Quantity	([3])	([3])	2,014	4,785

Table continued.

Table I-6--Continued
Magnesium: Apparent U.S. consumption and market shares, by source and period

Source	Measure	2003	2009	2015	2020
Israel	Quantity	5,747	16,491	12,933	4,140
All other sources	Quantity	3,902	4,011	6,380	18,184
Nonsubject sources	Quantity	34,706	26,203	28,166	28,451
Total imports	Quantity	69,357	26,660	28,166	28,504
Apparent U.S. consumption	Quantity	***	***	***	***
U.S. producers	Value	***	***	***	***
China[1] (alloy)	Value	24,020	723	3	174
Russia	Value	41,517	1,421	([3])	([3])
Subject sources	Value	65,537	2,144	3	174
Canada	Value	69,223	3,543	7,599	4,301
China (pure)	Value	257	25,196	9,876	122
Russia	Value	([3])	([3])	7,526	20,008
Israel	Value	14,267	65,320	57,414	32,517
All other sources	Value	12,850	27,062	37,440	116,594
Nonsubject sources	Value	96,597	121,121	119,855	173,542
All import sources	Value	162,134	123,265	119,858	173,715
Apparent U.S. consumption	Value	***	***	***	***
U.S. producers	Share of quantity	***	***	***	***
China (alloy)	Share of quantity	***	***	***	***
Russia	Share of quantity	***	***	***	***
Subject sources	Share of quantity	***	***	***	***
Canada	Share of quantity	***	***	***	***
China (pure)	Share of quantity	***	***	***	***
Russia	Share of quantity	***	***	***	***
Israel	Share of quantity	***	***	***	***
All other sources	Share of quantity	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***
All import sources	Share of quantity	***	***	***	***
U.S. producers	Share of value	***	***	***	***
China (alloy)	Share of value	***	***	***	***
Russia	Share of value	***	***	***	***
Subject sources	Share of value	***	***	***	***
Canada	Share of value	***	***	***	***
China (pure)	Share of value	***	***	***	***
Russia	Share of value	***	***	***	***
Israel	Share of value	***	***	***	***
All other sources	Share of value	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***
All import sources	Share of value	***	***	***	***

[1]Subject imports from China in this table consist of magnesium imported under HTS subheading 8104.19.00. Non-subject imports from China consist of magnesium imported under HTS subheading

8104.11.00 and 8104.30.00. All other non-subject imports are HTS subheadings 8104.11.00, 8104.19.00 and 8104.30.00.
[2] Less than 0.05 metric tons.
[3] Not applicable. The antidumping duty order on imports of pure and alloy magnesium from Russia were revoked effective April 15, 2010. Magnesium Metal from the Russian Federation: Revocation of Antidumping Duty Order Pursuant to Five-Year Sunset Review, 76 FR 13128, March 10, 2011.

Note: For 2020, apparent U.S. consumption is derived from U.S. imports.

Note: For a discussion of data coverage, please see "U.S. producers" and "U.S. importers" sections

Source: For the years 2003 / 2009 / 2015, data are compiled using data submitted in the Commission's second five-year reviews. For the year 2020, U.S. producers' U.S. shipments are compiled from the domestic interested party's' response to the Commission's notice of institution and U.S. imports are compiled using official Commerce statistics under HTS statistical reporting numbers 8104.11.0000, 8104.19.0000, and 8104.30.0000 accessed August 5, 2021.

The industry in China

During the final phase of the original investigation, the Commission received foreign producer questionnaires from 3 firms, which accounted for approximately *** percent of alloy magnesium exports from China to the United States during 2003.[54] During the first five-year review, the Commission received responses to the notice of institution from 4 firms, which accounted for approximately *** percent of production of alloy magnesium in China during 2009. Although the Commission did not receive responses from any respondent interested parties in its second five-year review, the domestic interested party provided a list of 10 possible producers of magnesium in China in that proceeding.[55] Although the Commission did not receive responses from any respondent interested parties in this five-year review, the domestic interested parties provided a list of 8 possible producers of alloy magnesium in China.[56]

Table I-7 presents events in the Chinese industry since the last five-year review.

[54] Original confidential report, p. VII-1.
[55] First review confidential report, p. I-36.
[56] Domestic interested party's response to the notice of institution, July 1, 2021, p. 25 and Attachment 10.

Table I-7
Alloy magnesium: Recent developments in the Chinese industry

Item	Firm	Event
Bankruptcy	Qinghai Salt Lake Magnesium Company	Originally planned to be the largest electrolytic magnesium plant in the world, the Chinese firm was in bankruptcy proceedings in 2020 and looks unlikely to produce commercially meaningful amounts of magnesium from its Golmud, Qinghai Province location in the short-term.
Expansion	Shanxi Yinguang Huasheng Magnesium Co., Ltd.	In early 2021 the company announced plans to add 40 new magnesium alloy precision processing production lines to increase processing of magnesium alloy die castings, extrusions and castings.

Source: Domestic interested parties' response to the notice of institution, July 1, 2021, attachment 4; "Yinguang magnesium Industry plans to add 40 magnesium alloy precision processing production lines," SMM News, January 30, 2021, https://news.metal.com/newscontent/101386572/***-Yinguang-magnesium-Industry-plans-to-add-40-magnesium-alloy-precision-processing-production-lines/, retrieved July 28, 2021.

Table I-8 presents export data for magnesium containing under 99.8% magnesium by weight, unwrought, a category that includes alloy magnesium and out-of-scope products, from China (by export destination in descending order of quantity for 2020).

Table I-8
Magnesium containing under 99.8% magnesium by weight, unwrought: Quantity of exports from China, by destination and period

Quantity in metric tons

Destination market	2016	2017	2018	2019	2020
Netherlands	33,403	40,479	34,515	22,738	25,588
Canada	21,005	20,128	18,503	19,724	15,066
United States	2,105	6,299	7,788	9,938	8,902
Taiwan	3,853	5,011	4,767	7,957	8,830
Romania	6,717	7,179	8,274	7,226	6,653
Korea	6,960	7,024	6,395	5,801	6,045
Spain	2,460	3,253	4,924	5,837	4,875
Japan	4,936	5,544	5,868	6,071	4,579
Poland	20	228	1,944	5,534	4,399
Germany	1,869	1,451	1,842	1,820	2,789
All other markets	24,836	20,179	17,896	20,703	19,465
All markets	108,164	116,775	112,716	113,349	107,191

Note: Because of rounding, figures may not add to totals shown.

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 8104.19, accessed July 15, 2021. These data may be overstated as HS subheading 8104.19 may contain products outside the scope of this review.

Third-country trade actions

In October 2004, Brazil imposed antidumping duties on magnesium from China. These duties applied to imports of metallic magnesium in unwrought forms, containing at least 99.8% by weight of magnesium, classified in HTS subheading 8104.11.00, and others (magnesium in raw form) classified in HTS subheading 8104.19. [57] Subsequently, Brazil conducted two reviews, with the most recent review in 2015. In September 2015, Brazil determined that the duties would be maintained. The current Brazil antidumping duties are $1.18 per kilogram ($0.535 per pound).[58]

The global market

The largest suppliers of unwrought magnesium containing under 99.8 percent magnesium by weight to the global market are China, Netherlands, Czech Republic, and Taiwan. According to GTA, global exports for unwrought magnesium containing under 99.8 percent magnesium by weight (HS 8104.19) were approximately 176,000 metric tons (194,007 short tons) in 2020 (Table I-9). HS 8104.19 includes alloy magnesium and out-of-scope products. China is the largest exporter globally, making up about 60 percent of the global exports in terms of quantity in 2020. The Netherlands is the next largest exporter, accounting for almost 16 percent of all global exports of unwrought magnesium containing under 99.8 percent magnesium by weight, in that year.

Table I-9
Magnesium containing under 99.8 percent magnesium by weight, unwrought: Quantity of global exports by source of exports and period

Quantity in metric tons

Source of exports	2016	2017	2018	2019	2020
China	108,164	116,775	112,716	113,349	107,191
Netherlands	34,159	36,230	34,271	24,186	27,433
Czech Republic	7,842	7,151	7,467	7,016	6,437
Taiwan	2,412	1,456	1,310	5,009	5,584
Germany	6,937	7,873	9,231	8,147	5,461
Israel	8,971	9,210	12,670	8,037	4,789
Hungary	5,266	6,571	5,932	4,904	4,373
United States	11,018	9,016	8,296	5,621	3,370

Table continued.

[57] Resolução CAMEX 27/2004; Resolução CAMEX 28/2005.
[58] Resolução CAMEX 91/2015.

Table I-9--Continued
Magnesium containing under 99.8 percent magnesium by weight, unwrought: Quantity of global exports by source of exports and period

Source of exports	2016	2017	2018	2019	2020
Korea	1,934	2,084	1,774	2,000	2,841
Slovenia	3,887	6,513	8,600	2,484	1,668
All other exporters	7,485	5,358	8,042	4,208	5,632
All exporters	199,514	209,873	212,178	186,399	175,673

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 8104.19. These data may be overstated as HS subheading 8104.19 may contain products outside the scope of this review.

Note: Because of rounding, figures may not add to total shown.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
86 FR 29239 June 1, 2021	*Initiation of Five-Year (Sunset) Reviews*	https://www.govinfo.gov/content/pkg/FR-2021-06-01/pdf/2021-11473.pdf
86 FR 29280 June 1, 2021	*Magnesium From China; Institution of a Five-Year Review*	https://www.govinfo.gov/content/pkg/FR-2021-06-01/pdf/2021-11249.pdf

APPENDIX B

COMPANY-SPECIFIC DATA

RESPONSE CHECKLIST FOR U.S. PRODUCERS

Table B-1
Magnesium: Response checklist for U.S. producers

Item	U.S Magnesium LLC and Local 8319
Nature of operation	✓
Statement of intent to participate	✓
Statement of likely effects of revoking the order	✓
U.S. producer list	✓
U.S. importer/foreign producer list	✓
List of 3-5 leading purchasers	✓
List of sources for national/regional prices	✓
Changes in supply/demand	✓

Table B-2
Magnesium: Trade and financial data submitted by U.S. producers, 2020

Quantity in metric tons, value in 1000 of USD, ratio in percent

Item	Measure	U.S. Magnesium LLC and Local 8319
Capacity	Quantity	***
Production	Quantity	***
Percent of total production reported	Ratio	***
Commercial U.S. shipments	Quantity	***
Commercial U.S. shipments:	Value	***
Internal consumption and company transfers	Quantity	***
Internal consumption and company transfers	Value	***
Net sales	Value	***
COGS	Value	***
Gross profit or (loss)	Value	***
SG&A expenses	Value	***
Operating income or (loss)	Value	***

Note: The financial data are for fiscal year ending October 31, 2020.

APPENDIX C

SUMMARY DATA COMPILED IN PRIOR PROCEEDINGS

Table C-4 (Reproduced from the original final staff report)
Pure magnesium: Summary data concerning the U.S. market, 2000-03

* * * * * * *

Table continued on next page.

Table C-4--Continued (Reproduced from the original final staff report)
Pure magnesium: Summary data concerning the U.S. market, 2000-03

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table C-5 (Reproduced from the original final staff report)
Alloy magnesium: Summary data concerning the U.S. market, 2000-03

* * * * * * *

Table continued on next page.

Table C-5--Continued (Reproduced from the original final staff report)
Alloy magnesium: Summary data concerning the U.S. market, 2000-03

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table C-6 (Reproduced from the original final staff report)
All magnesium: Summary data concerning the U.S. market, 2000-03

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Table continued on next page.

Table C-6--Continued (Reproduced from the original final staff report)
All magnesium: Summary data concerning the U.S. market, 2000-03

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table C-1
Total magnesium (pure and alloy): Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. consumption quantity:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. consumption value:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. imports from:															
Subject sources:															
China:															
Quantity	13,262	36	34	46	287	142	111	21	-98.9	-99.7	-4.9	34.8	518.9	-50.5	-80.9
Value	35,765	89	101	129	1,697	723	616	78	-98.0	-99.8	13.1	28.5	1,214.3	-57.4	-87.4
Unit value	$2,697	$2,452	$2,918	$2,781	$5,907	$5,091	$5,534	$3,663	88.8	-9.1	19.0	-4.7	112.4	-13.8	-33.8
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia:															
Quantity	23,439	12,573	13,038	6,105	2,210	315	20	298	-98.7	-46.4	3.7	-53.2	-63.8	-85.7	1,362.6
Value	50,843	32,162	29,616	14,198	8,475	1,421	136	951	-97.2	-36.7	-7.9	-52.1	-40.3	-83.2	601.1
Unit value	$2,169	$2,558	$2,272	$2,326	$3,835	$4,505	$6,660	$3,193	107.7	17.9	-11.2	2.4	64.9	17.5	-52.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (subject):															
Quantity	36,701	12,610	13,072	6,152	2,498	458	132	319	-98.8	-65.6	3.7	-52.9	-59.4	-81.7	142.5
Value	86,609	32,251	29,717	14,327	10,172	2,144	751	1,029	-97.5	-62.8	-7.9	-51.8	-29.0	-78.9	36.9
Unit value	$2,360	$2,558	$2,273	$2,329	$4,073	$4,687	$5,708	$3,224	98.6	8.4	-11.1	2.4	74.9	15.1	-43.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada:															
Quantity	26,265	31,003	29,108	15,261	3,228	733	396	472	-97.2	18.0	-6.1	-47.6	-78.9	-77.3	19.2
Value	77,352	99,703	87,626	53,304	17,921	3,543	1,615	1,986	-95.4	28.9	-12.1	-39.2	-66.4	-80.2	23.0
Unit value	$2,945	$3,216	$3,010	$3,493	$5,552	$4,833	$4,077	$4,207	64.1	9.2	-6.4	16.0	59.0	-13.0	3.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China:															
Quantity	6,812	1,503	335	3,476	19,113	4,968	4,269	439	-27.1	-77.9	-77.7	938.0	449.9	-74.0	-89.7
Value	16,255	4,246	809	11,386	106,024	25,196	21,553	1,325	55.0	-73.9	-81.0	1,308.1	831.1	-76.2	-93.9
Unit value	$2,386	$2,826	$2,415	$3,276	$5,547	$5,071	$5,048	$3,019	112.5	18.4	-14.5	35.7	69.3	-8.6	-40.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel:															
Quantity	13,320	15,074	10,757	17,188	26,148	16,491	8,043	8,875	23.8	13.2	-28.6	59.8	52.1	-36.9	10.3
Value	41,228	54,172	31,316	50,915	101,055	65,320	32,018	40,677	58.4	31.4	-42.2	62.6	98.5	-35.4	27.0
Unit value	$3,095	$3,594	$2,911	$2,962	$3,865	$3,961	$3,981	$4,583	28.0	16.1	-19.0	1.8	30.5	2.5	15.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources:															
Quantity	7,256	12,453	5,919	8,906	7,612	4,011	2,140	4,008	-44.7	71.6	-52.5	50.5	-14.5	-47.3	87.3
Value	24,131	40,524	21,631	31,752	47,519	27,062	15,487	20,201	12.1	67.9	-46.6	46.8	49.7	-43.0	30.4
Unit value	$3,326	$3,254	$3,655	$3,565	$6,243	$6,748	$7,238	$5,040	102.9	-2.1	12.3	-2.4	75.1	8.1	-30.4
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (nonsubject):															
Quantity	53,653	60,033	46,119	44,831	56,101	26,203	14,848	13,794	-51.2	11.9	-23.2	-2.8	25.1	-53.3	-7.1
Value	158,966	198,645	141,382	147,358	272,520	121,121	70,672	64,189	-23.8	25.0	-28.8	4.2	84.9	-55.6	-9.2
Unit value	$2,963	$3,309	$3,066	$3,287	$4,858	$4,622	$4,760	$4,653	56.0	11.7	-7.4	7.2	47.8	-4.8	-2.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All sources:															
Quantity	90,355	72,642	59,191	50,982	58,599	26,661	14,980	14,113	-70.5	-19.6	-18.5	-13.9	14.9	-54.5	-5.8
Value	245,575	230,895	171,099	161,685	282,692	123,265	71,424	65,218	-49.8	-6.0	-25.9	-5.5	74.8	-56.4	-8.7
Unit value	$2,718	$3,179	$2,891	$3,171	$4,824	$4,623	$4,768	$4,621	70.1	16.9	-9.1	9.7	52.1	-4.2	-3.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-1--Continued
Total magnesium (pure and alloy): Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis. Because of rounding, figures may not add to the totals shown. Unit values and shares are calculated from the unrounded figures.

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table C-2
Pure magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. consumption quantity:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. consumption value:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. imports from:															
Russia:															
Quantity	20,798	11,756	13,038	6,105	2,210	315	20	298	-98.5	-43.5	10.9	-53.2	-63.8	-85.7	1,362.6
Value	45,202	30,257	29,616	14,198	8,475	1,421	136	951	-96.9	-33.1	-2.1	-52.1	-40.3	-83.2	601.1
Unit value	$2,173	$2,574	$2,272	$2,326	$3,835	$4,505	$6,660	$3,193	107.3	18.4	-11.7	2.4	64.9	17.5	-52.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada:															
Quantity	2,680	5,564	9,753	1,942	1,029	583	246	472	-78.3	107.6	75.3	-80.1	-47.0	-43.4	91.7
Value	8,923	17,681	24,219	7,195	3,417	2,810	925	1,978	-68.5	98.2	37.0	-70.3	-52.5	-17.8	113.8
Unit value	$3,330	$3,178	$2,483	$3,705	$3,321	$4,823	$3,756	$4,189	44.9	-4.6	-21.9	49.2	-10.4	45.2	11.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China:															
Quantity	6,812	1,503	335	3,476	19,113	4,968	4,269	439	-27.1	-77.9	-77.7	938.0	449.9	-74.0	-89.7
Value	16,255	4,246	809	11,386	106,024	25,196	21,553	1,325	55.0	-73.9	-81.0	1,308.1	831.1	-76.2	-93.9
Unit value	$2,386	$2,826	$2,415	$3,276	$5,547	$5,071	$5,048	$3,019	112.5	18.4	-14.5	35.7	69.3	-8.6	-40.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel:															
Quantity	8,794	9,041	7,917	14,539	21,846	15,361	7,674	7,790	74.7	2.8	-12.4	83.6	50.3	-29.7	1.5
Value	25,099	30,391	22,638	43,076	83,436	60,410	30,492	35,194	140.7	21.1	-25.5	90.3	93.7	-27.6	15.4
Unit value	$2,854	$3,362	$2,859	$2,963	$3,819	$3,933	$3,973	$4,518	37.8	17.8	-14.9	3.6	28.9	3.0	13.7
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources:															
Quantity	3,409	3,359	2,343	2,101	1,227	947	565	793	-72.2	-1.5	-30.2	-10.3	-41.6	-22.8	40.3
Value	9,120	10,866	6,683	7,290	7,496	5,971	4,221	4,230	-34.5	19.1	-38.5	9.1	2.8	-20.3	0.2
Unit value	$2,676	$3,235	$2,852	$3,470	$6,107	$6,303	$7,470	$5,335	135.6	20.9	-11.8	21.7	76.0	3.2	-28.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (nonsubject):															
Quantity	21,694	19,466	20,348	22,057	43,216	21,859	12,755	9,494	0.8	-10.3	4.5	8.4	95.9	-49.4	-25.6
Value	59,397	63,185	54,349	68,948	200,373	94,387	57,191	42,726	58.9	6.4	-14.0	26.9	190.6	-52.9	-25.3
Unit value	$2,738	$3,246	$2,671	$3,126	$4,637	$4,318	$4,484	$4,501	57.7	18.6	-17.7	17.0	48.3	-6.9	0.4
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All sources:															
Quantity	42,492	31,222	33,386	28,162	45,426	22,174	12,776	9,792	-47.8	-26.5	6.9	-15.6	61.3	-51.2	-23.4
Value	104,599	93,442	83,966	83,146	208,848	95,808	57,327	43,678	-8.4	-10.7	-10.1	-1.0	151.2	-54.1	-23.8
Unit value	$2,462	$2,993	$2,515	$2,952	$4,598	$4,321	$4,487	$4,461	75.5	21.6	-16.0	17.4	55.7	-6.0	-0.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-2--Continued
Pure magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis. Because of rounding, figures may not add to the totals shown. Unit values and shares are calculated from the unrounded figures.

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table C-3
Alloy magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. consumption quantity:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. consumption value:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. imports from:															
Subject sources:															
China:															
Quantity	13,262	36	34	46	287	142	111	21	-98.9	-99.7	-4.9	34.8	518.9	-50.5	-80.9
Value	35,765	89	101	129	1,697	723	616	78	-98.0	-99.8	13.1	28.5	1,214.3	-57.4	-87.4
Unit value	$2,697	$2,452	$2,918	$2,781	$5,907	$5,091	$5,534	$3,663	88.8	-9.1	19.0	-4.7	112.4	-13.8	-33.8
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia:															
Quantity	2,641	817	0	0	0	0	0	0	-100.0	-69.1	-100.0	(3)	(3)	(3)	(3)
Value	5,642	1,905	0	0	0	0	0	0	-100.0	-66.2	-100.0	(3)	(3)	(3)	(3)
Unit value	$2,136	$2,332	(3)	(3)	(3)	(3)	(3)	(3)	(3)	9.2	(3)	(3)	(3)	(3)	(3)
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (subject):															
Quantity	15,903	853	34	46	287	142	111	21	-99.1	-94.6	-96.0	34.8	518.9	-50.5	-80.9
Value	41,407	1,994	101	129	1,697	723	616	78	-98.3	-95.2	-95.0	28.5	1,214.3	-57.4	-87.4
Unit value	$2,604	$2,337	$2,918	$2,781	$5,907	$5,091	$5,534	$3,663	95.5	-10.3	24.9	-4.7	112.4	-13.8	-33.8
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada:															
Quantity	23,586	25,439	19,355	13,319	2,199	150	150	0.08	-99.4	7.9	-23.9	-31.2	-83.5	-93.2	-99.9
Value	68,429	82,021	63,407	46,109	14,504	733	690	9	-98.9	19.9	-22.7	-27.3	-68.5	-94.9	-98.7
Unit value	$2,901	$3,224	$3,276	$3,462	$6,597	$4,872	$4,605	$110,513	67.9	11.1	1.6	5.7	90.6	-26.2	2,299.9
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel:															
Quantity	4,526	6,033	2,840	2,649	4,302	1,130	369	1,085	-75.0	33.3	-52.9	-6.7	62.4	-73.7	194.5
Value	16,129	23,780	8,678	7,839	17,619	4,910	1,526	5,483	-69.6	47.4	-63.5	-9.7	124.8	-72.1	259.4
Unit value	$3,564	$3,941	$3,056	$2,959	$4,096	$4,343	$4,140	$5,051	21.9	10.6	-22.5	-3.2	38.4	6.0	22.0
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources:															
Quantity	3,848	9,095	3,576	6,805	6,385	3,063	1,574	3,215	-20.4	136.4	-60.7	90.3	-6.2	-52.0	104.2
Value	15,011	29,658	14,948	24,462	40,024	21,091	11,266	15,971	40.5	97.6	-49.6	63.6	63.6	-47.3	41.8
Unit value	$3,901	$3,261	$4,181	$3,595	$6,269	$6,885	$7,155	$4,967	76.5	-16.4	28.2	-14.0	74.4	9.8	-30.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (nonsubject):															
Quantity	31,959	40,567	25,770	22,774	12,885	4,344	2,093	4,301	-86.4	26.9	-36.5	-11.6	-43.4	-66.3	105.5
Value	99,569	135,459	87,032	78,410	72,147	26,734	13,481	21,463	-73.2	36.0	-35.8	-9.9	-8.0	-62.9	59.2
Unit value	$3,115	$3,339	$3,377	$3,443	$5,599	$6,154	$6,442	$4,991	97.5	7.2	1.1	1.9	62.6	9.9	-22.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All sources:															
Quantity	47,863	41,420	25,805	22,820	13,172	4,486	2,204	4,322	-90.6	-13.5	-37.7	-11.6	-42.3	-65.9	96.1
Value	140,976	137,453	87,133	78,539	73,844	27,457	14,097	21,541	-80.5	-2.5	-36.6	-9.9	-6.0	-62.8	52.8
Unit value	$2,945	$3,319	$3,377	$3,442	$5,606	$6,120	$6,396	$4,984	107.8	12.7	1.8	1.9	62.9	9.2	-22.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-3--Continued
Alloy magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis. Because of rounding, figures may not add to the totals shown. Unit values and shares are calculated from the unrounded figures.

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table C-4
Granular magnesium (pure): Summary domestic industry data concerning U.S. grinders, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis. Because of rounding, figures may not add to the totals shown. Unit values and shares are calculated from the unrounded figures.

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

APPENDIX D

PURCHASER QUESTIONNAIRE RESPONSES

As part of their response to the notice of institution, interested parties were asked to provide a list of three to five leading purchasers in the U.S. market for the domestic like product. A response was received from the domestic interested party and it named the following five firms as the top purchasers of magnesium: ***. Purchaser questionnaires were sent to these five firms and eight firms (***) provided responses, which are presented below.

1. Have there been any significant changes in the supply and demand conditions for magnesium that have occurred in the United States or in the market for magnesium in China since January 1, 2016?

Purchaser	Yes / No	Changes that have occurred
***	***	***
***	***	***
***	***	***
***	***	***

Table continued on the following page.

-- Continued

Purchaser	Yes / No	Changes that have occurred
***	***	***
***	***	***
***	***	***
***	***	***

2. Do you anticipate any significant changes in the supply and demand conditions for magnesium in the United States or in the market for magnesium in China within a reasonably foreseeable time?

Purchaser	Yes / No	Changes that have occurred
***	***	***
***	***	***

Table continued on the following page.

-- Continued

Purchaser	Yes / No	Changes that have occurred
***	***	***

Table continued on the following page.

-- Continued

Purchaser	Yes / No	Changes that have occurred
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***