

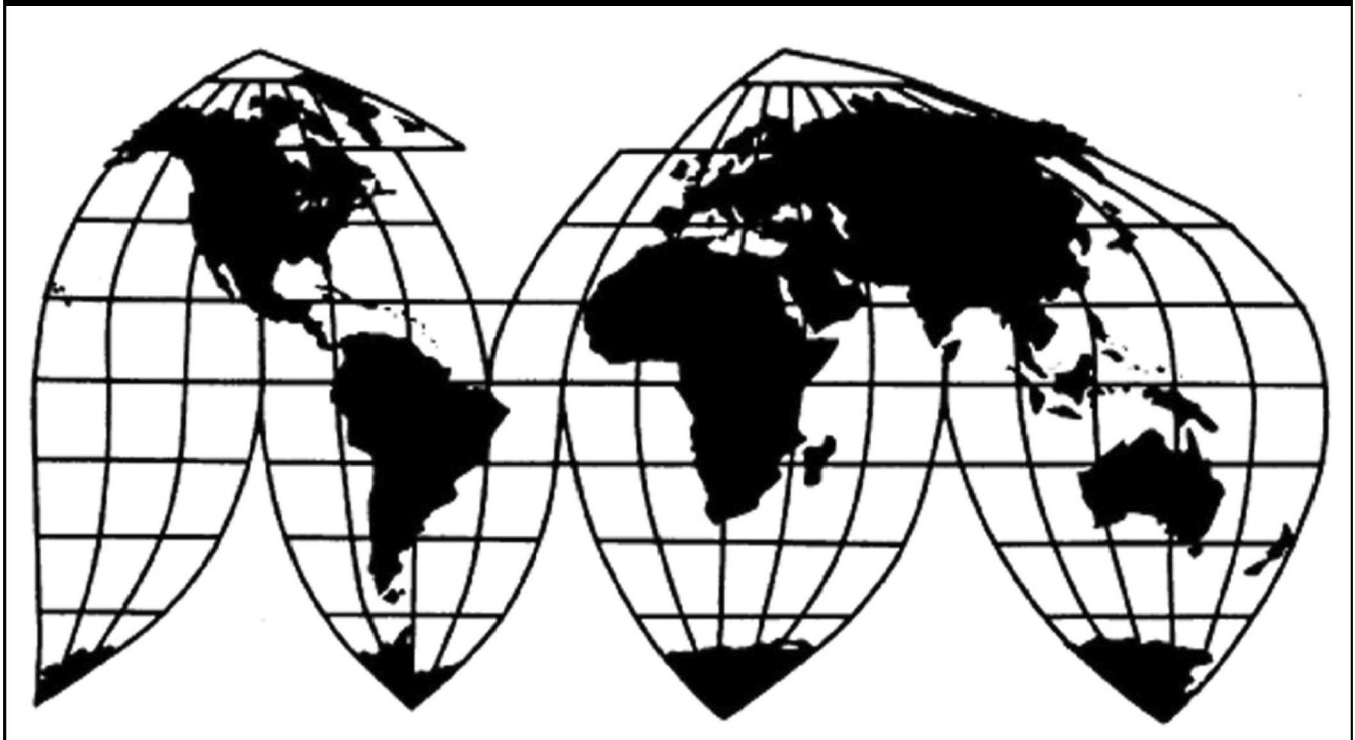
Pure Granular Magnesium from China

Investigation No. 731-TA-895 (Fourth Review)

Publication 5458

September 2023

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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Note: Information that would reveal confidential operations of individual concerns may not be published.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

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-895 (Fourth Review)

Pure Granular Magnesium from China

DETERMINATION

On the basis of the record¹ 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 pure granular 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.²

BACKGROUND

The Commission instituted this review on February 1, 2023 (88 FR 6784) and determined on May 8, 2023 that it would conduct an expedited review (88 FR 37275, June 7, 2023).

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

² Commissioner Amy A. Karpel not participating.

Views of the Commission

Based on the record in 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 pure granular 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. On October 17, 2000, Magnesium Corporation of America, the corporate predecessor of US Magnesium LLC (“US Magnesium”), and two labor unions filed antidumping duty petitions on imports of pure magnesium from Israel and Russia and on imports of pure granular magnesium from China, and a countervailing duty petition on imports of pure magnesium from Israel.¹ On September 27, 2001, the Department of Commerce (“Commerce”) determined that pure magnesium from Russia was not sold in the United States at less than fair value.² Accordingly, the Commission terminated its investigation with respect to Russia.³ On November 13, 2001, the Commission found that an industry in the United States was materially injured by reason of less than fair value imports of pure granular magnesium

¹ *Pure Magnesium from China, Israel, and Russia*, 65 Fed. Reg. 63888 (Oct. 25, 2000). The petitions, initially filed by Magnesium Corporation of America and the United Steel Workers of America, Local 8319, were subsequently amended to include the USWA International as co-petitioners. *Pure Magnesium From China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895 to 896 (Final), USITC Pub. 3467 (Nov. 2001) (“Original Determinations”) at 1 n.3.

² *Notice of Final Determination of Sales at Not Less Than Fair Value: Pure Magnesium From the Russian Federation*, 66 Fed. Reg. 49347, 49349 (Sept. 27, 2001).

³ *Pure Magnesium From Russia*, 66 Fed. Reg. 50680 (Sept. 27, 2001). Subject imports from Russia were not eligible for cumulation because of Commerce’s negative final antidumping duty determination concerning those imports. See 19 U.S.C. §1677 (7)(G)(ii)(II); Original Determinations, USITC Pub. 3467 at 14 n.71.

from China.⁴ It also found that an industry in the United States was not materially injured or threatened with material injury, and that the establishment of an industry in the United States was not materially retarded, by reason of imports from Israel of pure magnesium that were found to have been sold at less than fair value and subsidized by the government of Israel.⁵ Commerce issued an antidumping duty order on imports of pure granular magnesium from China on November 19, 2001.⁶

Prior Reviews. The Commission instituted the first five-year review of the antidumping duty order on pure granular magnesium from China in October 2006,⁷ the second five-year review of the order in February 2012,⁸ and the third five-year review in September 2017.⁹ For each of the prior reviews, the Commission conducted an expedited review and determined that revocation of the antidumping duty order would be likely to lead to continuation or recurrence

⁴ *Pure Magnesium From China and Israel*, 66 Fed. Reg. 58162 (Nov. 20, 2001); Original Determinations, USITC Pub. 3467 (Nov. 2001).

⁵ 66 Fed. Reg. 58162; Original Determinations, USITC Pub. 3467 (Nov. 2001). Pursuant to 19 U.S.C. § 1677(7)(G)(ii)(IV), the Commission was required to first determine whether there was material injury, or the threat thereof, to a domestic industry by reason of subject imports from Israel alone. Because the Commission reached a negative determination with respect to Israel, subject imports from Israel were not eligible for cumulation with subject imports from China. Original Determinations, USITC Pub. 3467 (Nov. 2001) at 14-15.

⁶ 66 Fed. Reg. 57936 (Nov. 19, 2001).

⁷ *Pure Magnesium From China*, 71 Fed. Reg. 58001 (Oct. 2, 2006).

⁸ *Pure Magnesium From China; Institution of a Five-Year Review*, 77 Fed. Reg. 5049 (Feb. 1, 2012).

⁹ *Pure Magnesium (Granular) From China; Institution of a Five-Year Review*, 82 Fed. Reg. 41651 (Sept. 1, 2017).

of material injury to an industry in the United States within a reasonably foreseeable time,¹⁰ and Commerce subsequently issued a notice of the continuation of the order.¹¹

Current Review. The Commission instituted this fourth five-year review of the antidumping duty order on pure granular magnesium from China on February 1, 2023.¹² It received one joint response to its notice of institution from US Magnesium and Magpro LLC (“Magpro”), domestic producers of magnesium, and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, Local 8319 (“Local 8319”), a labor union that represents workers at US Magnesium (collectively, “Domestic Interested Parties”).¹³ No respondent interested party responded to the notice of institution or participated in this review. On May 8, 2023, the Commission determined that the domestic interested party group response was adequate and the respondent interested party group response was inadequate. Finding no other circumstances that would warrant conducting a full review, the Commission determined to conduct an expedited review of the

¹⁰ *Pure Magnesium from China*, Inv. No. 731-TA-895 (Review), USITC Pub. 3908 (March 2007) (“First Review Determination”); *Pure Magnesium (Granular) from China*, Inv. No. 731-TA-895 (Second Review), USITC Pub. 4350 (Sept. 2012) (“Second Review Determination”); *Pure Magnesium from China*, Inv. No. 731-TA-895 (Third Review), USITC Pub. 4761 (Feb. 2018) (“Third Review Determination”).

¹¹ *Pure Magnesium in Granular Form from the People’s Republic of China: Continuation of Antidumping Duty Order*, 72 Fed. Reg. 14076 (March 26, 2007); *Pure Magnesium in Granular Form from the People’s Republic of China: Continuation of Antidumping Duty Order*, 77 Fed. Reg. 63787 (Oct. 17, 2012); *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).

¹² *Pure Granular Magnesium from China; Institution of a Five-Year Review*, 88 Fed. Reg. 6784 (Feb. 1, 2023).

¹³ Confidential Report INV-VV-037 (Apr. 25, 2023) as revised by *Revision to the Staff Report*, INV-VV-063 (July 28, 2023) (“CR”) at I-2; *Pure Granular Magnesium from China*, Inv. No. 731-TA-895 (Fourth Review), USITC Pub. 5458 (Sept. 2023) (“PR”) at I-2; Domestic Interested Parties’ Response to the Notice of Institution, EDIS Doc. 791690 (Mar. 3, 2023) (“Domestic Response”); Domestic Interested Parties’ Supplemental Response, EDIS Doc. 793144 (Mar. 24, 2023) (“Supplemental Domestic Response”).

antidumping duty order.¹⁴ Domestic Interested Parties submitted joint final comments pursuant to 19 C.F.R. § 207.62(d)(1) regarding the determination that the Commission should reach.¹⁵

U.S. industry data in this review is based on information provided by US Magnesium and Magpro in their response to the notice of institution, which is estimated to have accounted for *** percent of U.S. production of magnesium in 2022.¹⁶ U.S. import data and related information are based on Commerce’s official import statistics.¹⁷ Foreign industry data and related information are based on information from the original investigations and prior five-year reviews, information submitted by Domestic Interested Parties in response to the notice of institution, and publicly available information compiled by the Commission.¹⁸

Other Proceedings Involving the Same or Similar Merchandise. In addition to the current proceeding involving pure granular magnesium from China, Commerce and the Commission

¹⁴ *Pure Granular Magnesium From China; Scheduling of an Expedited Five-Year Review*, 88 Fed. Reg. 37275 (June 7, 2023). Chairman David S. Johanson voted to conduct a full review, basing his determination on the length of time that has transpired since the Commission last conducted a full review of this order and on the changes in the conditions of competition in the U.S. market for pure granular magnesium, including US Magnesium’s invocation of force majeure in 2021. *Id.*

¹⁵ The Domestic Industry’s Written Comments, EDIS Doc. 802606 (Aug. 17, 2023) (“Domestic Final Comments”).

¹⁶ CR/PR at Table I-2.

¹⁷ CR/PR at Tables I-6 and I-7. Official import statistics, based on HTSUS subheading 8104.30.00, may contain either pure or alloy magnesium products. However, according to petitioners in the original investigations, more than 95 percent of entries under this subheading were pure magnesium products containing at least 99.8 percent magnesium by weight. First Review Determination, USITC Pub. 3908 (Mar. 2007) at I-9, n.28.

¹⁸ *** firms, ***, responded to the Commission’s adequacy phase questionnaires and indicated they had not purchased pure granular magnesium since January 1, 2018. CR/PR at D-3.

have conducted numerous proceedings involving other magnesium products.¹⁹ The two other antidumping duty orders currently in effect cover imports of alloy magnesium and pure magnesium (ingot) from China.²⁰

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.”²¹ 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.”²² The Commission’s

¹⁹ See CR/PR at Table I-3; see also, e.g., 71 Fed. Reg. 38382 (Jul. 6, 2006) (revoking countervailing duty order on imports of pure and alloy magnesium from Canada following negative second review of the order); 69 Fed. Reg. 70649 (Dec. 7, 2004) (revoking antidumping duty order on imports of pure magnesium from Canada); 65 Fed. Reg. 41944 (July 7, 2000) (revoking antidumping duty order on imports of pure magnesium from Russia after no domestic interested party responded to notice instituting first review); 64 Fed. Reg. 46182 (Aug. 24, 1999) (revoking antidumping duty order on imports of pure magnesium from Ukraine following negative final determination by Commission on remand); 60 Fed. Reg. 26456 (May 17, 1995) (not imposing antidumping duty order on imports of alloy magnesium from Russia after Commission’s negative final determination); 88 Fed. Reg. 33862 (Oct. 1, 1991) (terminating investigation of imports of pure magnesium from Norway after withdrawal of petition).

²⁰ CR/PR at Table I-3. In their respective fifth five-year reviews of the antidumping duty order on imports of pure magnesium (ingot) from China, Commerce and the Commission reached affirmative determinations, and Commerce issued a notice continuing the order. See *Pure Magnesium from China*, Inv. No. 731-TA-696 (Fifth Review), USITC Pub. 5420 (May 2023); *Pure Magnesium From the People’s Republic of China: Continuation of Antidumping Duty Order* 88 Fed. Reg. 33862 (May 25, 2023). Commerce and the Commission also made affirmative determinations in their third five-year reviews of the antidumping duty order on imports of alloy magnesium from China, and Commerce issued a notice continuing the order. *Alloy Magnesium from China*, Inv. No. 731-TA-1071 (Third Review), USITC Pub. 5238 (Nov. 2021); *Magnesium Metal From the People’s Republic of China: Continuation of Antidumping Duty Order*, 86 Fed. Reg. 67439 (Nov. 26, 2021).

²¹ 19 U.S.C. § 1677(4)(A).

²² 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).

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.²³

Commerce has defined the imported merchandise within the scope of the order under review as follows:

{ . . } pure magnesium products, regardless of chemistry, including, without limitation, raspings, granules, turnings, chips, powder, and briquettes, except as noted {below}.

Pure magnesium includes: (1) Products that contain at least 99.95 percent primary magnesium, by weight (generally referred to as “ultra pure” magnesium); (2) products that contain less than 99.95 percent but not less than 99.8 percent primary magnesium, by weight (generally referred to as “pure” magnesium); (3) chemical combinations of pure 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” (generally referred to as “off specification pure” magnesium); and (4) physical mixtures of pure magnesium and other material(s) in which the pure magnesium content is 50 percent or greater, but less than 99.8 percent, by weight.

Excluded from this order are mixtures containing 90 percent or less pure magnesium by weight and one or more of certain non-magnesium granular materials to make magnesium-based reagent mixtures. The non-magnesium granular materials of which Commerce is aware used to make such excluded reagents are: Lime, calcium metal, calcium silicon, calcium carbide, calcium carbonate, carbon, slag coagulants, fluorspar, nepheline syenite, feldspar, aluminum, alumina (Al₂O₃), calcium aluminate, soda ash, hydrocarbons, graphite, coke, silicon, rare earth metals/mischmetal, cryolite, silica/fly ash, magnesium oxide,

²³ 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).

periclase, ferroalloys, dolomitic lime, and colemanite. A party importing a magnesium-based reagent which includes one or more materials not on this list is required to seek a scope clarification from Commerce before such a mixture may be imported free of antidumping duties.²⁴

Magnesium is a silver-white metallic element and the lightest of all structural metals.²⁵

Magnesium is available in two principal forms, pure and alloy.²⁶ Pure magnesium contains at least 99.8 percent magnesium by weight.²⁷ It 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.²⁸ Due to its low tensile and yield strengths, pure magnesium is not typically used in structural applications.²⁹ Alloy magnesium is an alloy consisting of magnesium and other metals, containing less than 99.8 percent magnesium by weight, with magnesium the largest metallic element in the alloy by weight.³⁰ Alloy magnesium has certain properties that improve its strength, ductility, workability, corrosion resistance,

²⁴ *Issues and Decision Memorandum for the Final Results of the Fourth Expedited Sunset Review: Pure Magnesium in Granular Form from the People's Republic of China*, EDIS Doc. 800953 (May 31, 2023) ("Commerce I&D Memo") at 2-3. The scope of the order in this review excludes pure magnesium that is already covered by the existing order on pure magnesium in ingot form. *Id.* at 2.

Commerce has not issued any scope rulings since the completion of the last five-year review. In addition, Commerce has not issued any anti-circumvention findings, changed circumstances findings, company revocations, or duty absorption findings since imposition of the order. *Id.* at 3-4.

²⁵ CR/PR at I-9.

²⁶ CR/PR at I-9.

²⁷ CR/PR at I-18. The scope definition, however, defines "off-specification pure" magnesium as products that contain 50% or greater, but less than 99.8% primary magnesium, by weight, and that do not conform to ASTM specifications for alloy magnesium. *Id.* at I-15.

²⁸ CR/PR at I-10.

²⁹ CR/PR at I-10.

³⁰ CR/PR at I-11.

density, or castability compared with pure magnesium.³¹ It is commonly used in structural applications such as castings (die, permanent mold, and sand) and extrusions for the automotive industry.³²

Pure and alloy magnesium are produced as either primary or secondary magnesium. Primary magnesium is magnesium produced by decomposing virgin raw materials into magnesium metal.³³ Secondary magnesium is magnesium produced by recycling (or melting) magnesium-based scrap.³⁴

Magnesium may be either cast or granular.³⁵ Cast magnesium is the solid, ingot, cooled form of magnesium metal.³⁶ Granular magnesium is cast magnesium that has been ground, chipped, crushed, machined, or atomized into raspings, granules, turnings, chips, powder, or briquettes and includes all non-molten physical forms of magnesium other than castings.³⁷ Granular magnesium may be either pure magnesium or alloy magnesium but is typically pure or off-specification pure magnesium (magnesium not meeting ASTM specifications for magnesium alloy).³⁸ Granular magnesium is primarily used in the production of magnesium-based desulfurizing reagent mixtures that are used in steelmaking to reduce the sulfur content of

³¹ CR/PR at I-11.

³² CR/PR at I-10-11.

³³ CR/PR at I-11.

³⁴ CR/PR at I-11.

³⁵ CR/PR at I-12.

³⁶ CR/PR at I-12.

³⁷ CR/PR at I-12.

³⁸ CR/PR at I-12.

steel.³⁹ Granular magnesium is also used in defense applications, such as military ordnance and flares.⁴⁰

1. The Prior Proceedings

In the original investigations, the Commission defined a single domestic like product, pure magnesium, that included both granular magnesium and magnesium ingot.⁴¹ It found that granular magnesium and magnesium ingot were produced in a continuum of forms and sizes, shared the same chemical properties, were sold through similar channels of distribution, and were interchangeable for significant end uses.⁴² It found that although grinding operations generally took place in separate facilities using separate workers, the same production facilities, processes, and workers were used to produce both granular magnesium and magnesium ingot up to the grinding stage.⁴³ The Commission observed, however, that the record contained some support for finding two domestic like products.⁴⁴

In the expedited first five-year review, the Commission expanded the definition of the domestic like product to encompass alloy magnesium and secondary magnesium, as it had in two recent determinations involving other magnesium products.⁴⁵ It explained that US

³⁹ CR/PR at I-12.

⁴⁰ CR/PR at I-12.

⁴¹ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 10. Two Commissioners defined two domestic like products, pure granular magnesium and pure magnesium ingot. *Id.* at 1 n.2.

⁴² Original Determinations, USITC Pub. 3467 (Nov. 2001) at 8-9.

⁴³ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 9.

⁴⁴ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 8.

⁴⁵ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 12. These determinations were *Magnesium From China and Russia*, Inv. Nos. 731-TA-1071-1072 (Final), USITC Pub. 3763 (April 2005) and *Pure and Alloy Magnesium From Canada and Pure Magnesium from China*, Inv. Nos. 701-TA-309-A-B and 731-TA-696 (Second Review), USITC Pub. 3859 (July 2006) (“Canada/China Second Review”) (in which the Commission split three-three on the question of domestic like product).

Magnesium had asked the Commission to define the domestic like product in this way, that no party had argued against the definition, and that there was no information in the record that would call into question the Commission's decision to define the domestic like product in the same manner as in the two recent determinations concerning other magnesium products.⁴⁶

In the expedited second and third five-year reviews, the Commission defined the domestic like product as consisting of pure and alloy magnesium, including primary and secondary magnesium in both cast and granular forms.⁴⁷ The Commission explained that there was no new information in the record to suggest any reason to revisit the definition from the prior five-year review or from a recent full review involving other magnesium products in which the Commission adopted the same definition.^{48 49}

2. The Current Review

In the current review, the record does not contain any new information suggesting that the pertinent product characteristics and uses of magnesium have changed since the prior reviews so as to warrant revisiting the Commission's domestic like product definition.⁵⁰

Domestic Interested Parties indicate that they agree with the definition of the domestic like

⁴⁶ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 12.

⁴⁷ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 7-8; Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 9.

⁴⁸ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 7. The relevant review was of *Magnesium from China and Russia*, Inv. Nos 731-TA-1071 and 1072 (Review), USITC Pub. 4214 (Feb. 2011).

⁴⁹ In its most recent review of the antidumping duty order on imports of pure magnesium (ingot) from China and in its most recent review of the antidumping duty order on imports of alloy magnesium from China, the Commission also defined a single domestic like product consisting of pure and alloy magnesium, including primary and secondary magnesium in both cast and granular forms. *Pure Magnesium from China*, Inv. No. 731-TA-696 (Fifth Review), USITC Pub. 5420 (May 2023) at 15-16; *Alloy Magnesium from China*, Inv. No. 731-TA-1071 (Third Review), USITC Pub. 5238 (Nov. 2021) at 9.

⁵⁰ See CR/PR at I-9-16.

product from the prior reviews.⁵¹ We therefore define a single domestic like product consisting of pure and alloy magnesium, including primary and secondary magnesium and cast and granular magnesium.

B. 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.”⁵² In defining the domestic industry, the Commission’s general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

1. The Prior Proceedings

In its original determinations, the Commission examined whether grinding operations constituted sufficient production-related activity to qualify grinders as domestic producers, and found that they did.⁵³ Based on its definition of the domestic like product, the Commission defined a corresponding domestic industry that included all producers of pure magnesium, except for domestic producer ESM Manufacturing, which was not included on the basis that appropriate circumstances existed to exclude it from the domestic industry as a related party.⁵⁴

⁵¹ Domestic Response at 26; Domestic Final Comments at 3.

⁵² 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.

⁵³ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 9-11.

⁵⁴ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 9-13.

In the first five-year review, in accordance with its domestic like product definition, the Commission defined the domestic industry as all domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form.⁵⁵ The Commission again included grinders in the domestic industry.⁵⁶ It noted that there was limited information in the record concerning related party issues, so it was unable to resolve whether any domestic producers were related parties or whether appropriate circumstances existed to exclude any producers from the domestic industry.⁵⁷

In the second and third five-year reviews, the Commission continued to define the domestic industry as consisting of all domestic producers, including grinders, of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form.⁵⁸ In the second review, the Commission also found that there was no information in the record sufficient to make a related party determination with respect to two entities which US Magnesium alleged imported subject merchandise.⁵⁹

⁵⁵ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 16.

⁵⁶ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 14-15. The Commission noted that the limited information in that review relating to the production-related activities of grinders did not indicate that the nature of the activities had changed since the original investigations. *Id.*

⁵⁷ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 15-16.

⁵⁸ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 8; Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 10-11.

⁵⁹ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 8. There were no related party issues in the third review. Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 10-11.

2. The Current Review

In the current review, Domestic Interested Parties generally agree with the definition of the domestic industry as defined in the prior reviews.⁶⁰ There are no related party issues in this review.⁶¹ Nor is there any new information on the record indicating that the nature of domestic grinding operations has changed so as to warrant reconsideration of the inclusion of grinders in the domestic industry.⁶² Accordingly, consistent with our definition of the domestic like product, we again define the domestic industry to include all domestic producers, including grinders, of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form.

III. Revocation of the Antidumping Duty 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

⁶⁰ See Domestic Response at 26. Specifically, Domestic Interested Parties contend that the Commission should define the domestic industry to include all domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in cast and granular form, with the exception of firms that recycle the scrap generated in their diecasting operations into magnesium. No diecaster responded to the notice of institution with data on its operations or information on the nature of its production-related activities. Consequently, there is insufficient information on the record of this review to determine whether diecasters engage in sufficient production-related activities to qualify as domestic producers. In any event, there is no data concerning diecasters on the record that could be excluded from domestic industry data if it were found that they did not qualify as domestic producers.

⁶¹ See Domestic Response at 22 and Attach. 8

⁶² See CR/PR at I-15, I-17

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.”⁶³

The 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.”⁶⁴ Thus, the likelihood standard is prospective in nature.⁶⁵ The U.S. Court of International Trade 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.⁶⁶

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

⁶³ 19 U.S.C. § 1675a(a).

⁶⁴ SAA at 883-84. 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.

⁶⁵ 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.

⁶⁶ 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’”).

time.”⁶⁷ 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.”⁶⁸

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 orders are revoked or the suspended investigation is terminated.”⁶⁹ 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 regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).⁷⁰ 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.⁷¹

⁶⁷ 19 U.S.C. § 1675a(a)(5).

⁶⁸ 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.*

⁶⁹ 19 U.S.C. § 1675a(a)(1).

⁷⁰ 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings with respect to this order. Commerce’s I&D Memo at 3.

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

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.⁷² 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.⁷³

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.⁷⁴

⁷² 19 U.S.C. § 1675a(a)(2).

⁷³ 19 U.S.C. § 1675a(a)(2)(A-D).

⁷⁴ 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.

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 development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.⁷⁵ 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.⁷⁶

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

⁷⁵ 19 U.S.C. § 1675a(a)(4).

⁷⁶ 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.

available from the original investigations and prior reviews and the limited new information on the record of this review.

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.”⁷⁷ The following conditions of competition inform our determination.

1. Demand Conditions

Prior Proceedings. In the original investigations, the Commission found that apparent U.S. consumption for magnesium ingot and granular magnesium had declined. It also found that demand for pure magnesium ingot depended largely on the demand for aluminum, particularly aluminum sheet used in the production of beverage cans and other packaging.⁷⁸

In the first five-year review, the Commission found that demand for pure magnesium continued to be largely derived from the demand for its end uses and that apparent U.S. consumption for magnesium ingot and granular magnesium had declined.⁷⁹

In the second and third five-year reviews, the Commission found that demand for magnesium tracked demand for downstream products, particularly aluminum, and was generally tied to overall economic activity in the United States.⁸⁰ In the second review, the Commission observed that apparent U.S. consumption of magnesium had fluctuated but

⁷⁷ 19 U.S.C. § 1675a(a)(4).

⁷⁸ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 17.

⁷⁹ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 19.

⁸⁰ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 10; Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 14.

declined overall from 2005 to 2010.⁸¹ In the third review, the Commission observed that apparent U.S. consumption was *** metric tons (“MT”) in 2016, and noted US Magnesium’s assertion that demand for pure magnesium had declined significantly after Allegheny Technologies Incorporated (“ATI”) announced the closure of its titanium sponge production facility in Utah.⁸²

Current Review. In this review, there is no new information indicating that the factors influencing demand have changed since the prior proceedings. According to Domestic Interested Parties, demand for magnesium continues to be driven by demand for its downstream uses, including aluminum production, and remains tied to overall economic activity in the United States.⁸³ Apparent U.S. consumption of magnesium was *** MT in 2022.⁸⁴ Apparent U.S. consumption in 2022 may be understated relative to apparent U.S consumption in 2000, 2005, 2011, and 2016, because data coverage of the domestic industry is lower in this review.⁸⁵

2. Supply Conditions

Prior Proceedings. In the original investigations, the Commission found that three producers produced magnesium ingot in the United States and that three grinders produced

⁸¹ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 10-11.

⁸² Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 14; Confidential Third Review Determination, EDIS Doc. 793686 (Mar. 1, 2018) at 20.

⁸³ Domestic Response at 13.

⁸⁴ CR/PR at Table I-7.

⁸⁵ Data coverage of the domestic industry is lower in 2022, at *** percent of total U.S. production of the domestic like product, than in the original investigations and first review, where responding domestic producers accounted for all domestic production, and the second and third reviews, when responding domestic producers accounted for *** percent and *** percent of domestic production, respectively. CR/PR at I-17-18, Table I-2.

granular magnesium.⁸⁶ The Commission also found that nonsubject imports were present in the U.S. market throughout the period of investigation.⁸⁷

In the first five-year review, the Commission found that there was one producer of pure and alloy magnesium (US Magnesium), three producers engaged in grinding operations, and there were at least three known producers of secondary magnesium in the United States.⁸⁸ The U.S. market was also supplied by both subject imports from China and nonsubject imports.⁸⁹

In the second five-year review, the Commission observed that the U.S. market continued to be supplied by the domestic industry, subject imports, and nonsubject imports.⁹⁰ It also found that there were ten domestic producers of the domestic like product (including producers of primary and secondary magnesium, grinders, and diecasters), with US Magnesium being the largest domestic producer.⁹¹ It further found that US Magnesium had increased its capacity by over 30 percent since the imposition of the antidumping duty order and was engaged in further increasing its capacity.⁹² It observed that producers of primary magnesium had a strong incentive to maintain a continuous level of production to avoid deterioration and significant rebuilding costs of the electrolytic cells used to produce primary magnesium.⁹³

⁸⁶ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 10, 16-17.

⁸⁷ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 17.

⁸⁸ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 18; Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 11.

⁸⁹ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 18.

⁹⁰ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 11.

⁹¹ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 11.

⁹² Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 11.

⁹³ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 11.

In the third five-year review, the Commission observed that in 2016, the domestic industry accounted for *** percent of apparent U.S. consumption, subject imports for *** percent, and nonsubject imports for *** percent.⁹⁴ It found that there were nine known U.S. producers of the domestic like product, including US Magnesium. US Magnesium had increased its production capacity by 21,500 MT in 2012, but postponed plans for further expansion after ATI's announced closure of its titanium sponge plant.⁹⁵ According to US Magnesium, two additional firms were in the process of establishing new magnesium production facilities in the United States.⁹⁶

Current Review. The domestic industry's ability to supply the U.S. market was constrained during the period of review as US Magnesium, historically the largest domestic magnesium producer, suffered a series of equipment failures beginning in 2021 that led to a reduction in its magnesium production, its declaration of *force majeure*, and the eventual idling of its facility in August 2022.⁹⁷ Domestic Interested Parties report that US Magnesium ***.⁹⁸ They also contend that US Magnesium has added and continues to add production capacity to its facility, notwithstanding the idling of production, and that Magpro, which ***.⁹⁹ In addition to US Magnesium and Magpro, Domestic Interested Parties identified six additional U.S.

⁹⁴ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 15; Confidential Third Review Determination, EDIS Doc. 793686 (Mar. 1, 2018) at 21.

⁹⁵ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 16.

⁹⁶ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 16.

⁹⁷ CR/PR at Table I-4; Domestic Response at 21; Supplemental Domestic Response at 2-3; see also *Pure Magnesium from China*, Inv. No. 731-TA-696 (Fifth Review), USITC Pub. 5420 (May 2023) at 25 n.140, 40 n.236.

⁹⁸ Domestic Response at 22, 24. More specifically, US Magnesium states that it ***. It explains that ***. Domestic Response at 22; Supplemental Domestic Response at 2-3.

⁹⁹ Domestic Response at 12, 24; Supplemental Domestic Response at 2.

producers of the domestic like product,¹⁰⁰ and indicated that Western Magnesium, a potential new entrant noted during the third review, continued to make improvements to its pilot plant in 2023.¹⁰¹

In 2022, the domestic industry's production capacity was *** MT and its U.S. shipments were *** MT, down *** from 2000, the terminal year of the original investigation, when it was *** MT, and 2016, the terminal year of the prior review, when its capacity was *** MT and its U.S. shipments were *** MT.¹⁰² The domestic industry's share of apparent U.S. consumption of all magnesium was *** percent in 2022.¹⁰³

According to official import statistics, subject imports from China totaled 3 MT in 2022 and accounted for *** percent of apparent U.S. consumption that year.¹⁰⁴

Nonsubject imports of granular magnesium accounted for *** percent of apparent U.S. consumption of all magnesium in 2022.¹⁰⁵ The largest sources of nonsubject imports in 2022 were Taiwan, Austria, and Turkey.¹⁰⁶

¹⁰⁰ These six firms are AMACOR, MagRe Tech Inc., Rossborough, Luxfer Magtech, Meridian Technologies, and Spartan Light Metal Productions. Domestic Response at Attach. 9.

¹⁰¹ Domestic Response at 24-25. According to Domestic Interested Parties, Western Magnesium was formerly known as Nevada Clean Magnesium Inc., having changed its name since the third five-year review. *Id.* at 25.

¹⁰² CR/PR at Table I-5.

¹⁰³ CR/PR at Table I-7. As explained above, the domestic industry's data for 2022 may be understated and, consequently, the domestic industry's market share may be understated while the market share of subject and nonsubject imports may be overstated. Domestic Interested Parties explain that prior to ***. To the best of their knowledge, they are the only significant producers of pure magnesium in the United States. Domestic Response at 24 n. 62.

¹⁰⁴ CR/PR at Tables I-6 and I-7.

¹⁰⁵ *Derived from* CR/PR at Table I-7 and note. Nonsubject imports of pure granular magnesium totaled 1,962 MT in 2022. *Id.* at Table I-7 note. The remaining share of apparent U.S. consumption consists of out-of-scope magnesium imports. *Id.*

¹⁰⁶ CR/PR at Table I-6.

3. Substitutability and Other Conditions

Prior Proceedings. In the original investigations and first and second reviews, the Commission found that subject imports from China and the domestic like product were highly substitutable, while in the third review, the Commission found that they were substitutable to at least a moderately high degree.¹⁰⁷ In all the prior proceedings, the Commission found that price was an important consideration in purchasing decisions.¹⁰⁸

Current Review. 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 have changed since the prior proceedings. Domestic Interested Parties claim that the domestic like product and subject imports are highly interchangeable, and that price remains an important factor for purchasers.¹⁰⁹ Accordingly, we find that there is at least a moderately high degree of substitutability between the domestic like product and subject imports and that price remains an important factor in purchasing decisions.

In September 2018, pure granular magnesium originating in China imported under HTSUS subheading 8104.30.00 became subject to an additional 10 percent *ad valorem* duty under section 301 of the Trade Act of 1974 (“section 301”). In May 2019, the section 301 duty for pure granular magnesium originating in China increased to 25 percent *ad valorem*.¹¹⁰

¹⁰⁷ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 19; First Review Determination, USITC Pub. 3908 (Mar. 2007) at 20; Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 12; Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 15.

¹⁰⁸ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 19; First Review Determination, USITC Pub. 3908 (Mar. 2007) at 20; Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 12; Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 15.

¹⁰⁹ Domestic Response at 13.

¹¹⁰ CR/PR at I-9.

C. Likely Volume of Subject Imports

1. The Prior Proceedings

In the original investigations, the Commission found that the volume of subject imports of granular magnesium from China and the increase in that volume were significant in absolute terms and relative to consumption in the United States.¹¹¹ The volume of subject imports from China increased from 1998 to 2000 and the Commission attributed the lower volume of subject imports in the first half of 2001, as compared to the second half of 2000, to the pendency of the investigations.¹¹²

In the first five-year review, the Commission found that subject producers in China collectively had substantial production capacity that had continued to increase in recent years, produced large and increasing quantities of granular pure magnesium, demonstrated an ability to shift production from one form of magnesium to another, exported substantial and growing quantities of subject merchandise, and continued to rely on the U.S. market even under the discipline of the order.¹¹³ The Commission observed that the record provided some evidence that producers in China benefitted from export tax rebates and faced tariff barriers in Brazil.¹¹⁴ Based on these factors, as well as its findings in the original investigations, the Commission concluded that the volume of the subject merchandise from China would likely be significant, both in absolute terms and relative to consumption and production in the United States, absent the restraining effect of the order.¹¹⁵

¹¹¹ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 18-19.

¹¹² Original Determinations, USITC Pub. 3467 (Nov. 2001) at 18.

¹¹³ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 20-23.

¹¹⁴ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 20-23.

¹¹⁵ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 20-23.

In the second five-year review, the Commission found that the likely volume of subject imports, both in absolute terms and as a share of the U.S. market, would be significant if the order were revoked.¹¹⁶ It found that China was the world's largest magnesium producer and that producers there had massive primary magnesium production capacity and considerable unused capacity, and planned increases in production capacity.¹¹⁷ It found that the industry producing magnesium in China was export oriented, with more than half of its 2011 production being exported.¹¹⁸ According to the Commission, magnesium producers in China could switch easily between production of alloy and pure magnesium. It found that with the existing antidumping duty orders in place against alloy magnesium in the United States, China would have a strong incentive to shift production if the orders were revoked.¹¹⁹ It also found that exports of magnesium from China continued to face trade barriers in Brazil.¹²⁰

In the third five-year review, the Commission found that the volume of subject imports would likely be significant if the order were revoked.¹²¹ The Commission found that imports of magnesium from China had remained in the U.S. market at appreciable levels with the order in place.¹²² The information available indicated that the magnesium industry in China had substantial capacity, having increased its capacity 48.1 percent from 2010 to 2015 with further increases projected, and excess capacity, with a capacity utilization rate of only 53 percent in

¹¹⁶ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 14.

¹¹⁷ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 13.

¹¹⁸ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 13.

¹¹⁹ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 13-14.

¹²⁰ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 14.

¹²¹ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 18.

¹²² Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 17-18. Subject imports' share of apparent U.S. consumption was *** percent in 2016. *Id.* at 18

2015.¹²³ The Commission found that the magnesium industry in China was significantly export oriented, as China was the world's largest exporter of pure granular magnesium in 2016, and remained subject to antidumping duties in Brazil.¹²⁴ Noting the separate antidumping duty orders on out-of-scope imports of pure magnesium ingot and alloy magnesium from China, the Commission found no indication on the record that Chinese producers had not retained the ability to shift production among different forms of magnesium.¹²⁵

2. The Current Review

The record in this review indicates that subject imports were present in the U.S. market at low levels during period of review, including subject imports of 400 MT in 2018, 6 MT in 2020, less than 1 MT in 2021, and 3 MT in 2022.¹²⁶

The record contains limited information on the subject industry in China, but the available information indicates that Chinese magnesium producers have the ability and incentive to export significant volumes of subject merchandise to the United States if the order were revoked. Since the original investigations, the magnesium industry in China has grown to become the world's largest by far.¹²⁷ According to the U.S. Geological Survey (USGS), in 2020, the most recent year for which data are available, the primary magnesium industry in China had production capacity of 1.8 million MT, its production was 886,000 MT, and its capacity utilization rate was less than 50 percent, yielding excess capacity of about 900,000 MT.¹²⁸ Thus,

¹²³ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 18.

¹²⁴ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 18.

¹²⁵ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 18.

¹²⁶ CR/PR at Table I-6. There are no data available for subject imports from China in 2019. *Id.*

¹²⁷ See Domestic Response at Attach 7.

¹²⁸ See Domestic Response at 16-17, Attach. 7. Domestic Interested Parties identified four possible producers of pure granular magnesium in China. Domestic Response at Attach. 11.

the Chinese magnesium industry's excess capacity in 2020 was nearly 17 times greater than apparent U.S. consumption in 2022.¹²⁹

In addition, the Chinese magnesium industry's excess capacity has not prevented it from continuing to increase its capacity. Based on information presented by CM Group, a consulting firm, at the International Magnesium Association ("IMA") Conference in August 2022, 330,000 MT of new magnesium capacity is currently under construction in China, including a project in China's Anhui province adding 300,000 MT of magnesium capacity that is scheduled to become operational in 2023.¹³⁰ Further, Yunhai Special Metals announced in 2022 a plan to spend 4.7 billion yuan (\$656 million) to build four new magnesium projects, including a project in Shanxi province to increase annual output by 100,000 MT.¹³¹

Chinese producers could also shift production from out-of-scope products to pure granular magnesium as a means of increasing their exports to the United States after revocation. The Commission found in the first and second reviews that the Chinese industry had engaged in such product shifting in response to the imposition of antidumping duty orders on other forms of magnesium, and the information available indicates that the Chinese industry retains the ability to do so.¹³²

The information available also indicates that the subject industry in China remains export oriented. According to Global Trade Atlas ("GTA") data, China was the world's largest

¹²⁹ CR/PR at Table I-7. Apparent U.S. consumption in 2022 may be understated due to the data coverage of the domestic industry in this review, as discussed above.

¹³⁰ Domestic Response at 17 and Attachs. 4 & 6.

¹³¹ CR/PR at Table I-8.

¹³² See First Review Determination, USITC Pub. 3908 (Mar. 2007) at 22; Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 13; Domestic Response at 19.

exporter of magnesium raspings, turnings and granules, and powders, a category that includes granular magnesium as well as out-of-scope merchandise, throughout the period of review; its exports of such magnesium totaled 69,686 MT in 2022, accounting for 75.5 percent of global exports that year.¹³³ According to information presented by CM Group at the IMA Conference, China's magnesium consumption for iron and steel desulfurization, the largest end use for granular magnesium, was equivalent to approximately one-third of its exports of pure granular magnesium in 2021, suggesting that approximately two-thirds of the Chinese industry's shipments of granulated magnesium were exported that year.¹³⁴ With respect to all magnesium, the presenters indicated that 48 percent of magnesium produced in China was for exportation in 2021, although China's domestic consumption of magnesium as a share of production has increased over the last decade.¹³⁵

Available information also indicates that the U.S. market remains attractive to subject producers. According to information presented by CM Group at the IMA Conference, magnesium prices are generally higher in the United States than in China or the European Union.¹³⁶ This would create an economic incentive for subject producers to increase their exports of pure granular magnesium to the United States if the order were revoked, particularly in light of the antidumping duty orders maintained on imports of pure ingot and alloy magnesium from China.¹³⁷ In the past, as different forms of magnesium imported from China

¹³³ CR/PR at I-30 and Table I-10.

¹³⁴ Domestic Response at 15-16, Attach. 4.

¹³⁵ Domestic Response at Attach. 4, pp. 5-6.

¹³⁶ Domestic Response at 20 and Attach. 6.

¹³⁷ CR/PR at I-5.

became subject to successive antidumping duty orders, the Chinese industry responded by shifting production to forms of magnesium not under order as a means of increasing its exports to the United States, and the industry would likely do so again if the order on pure granulated magnesium from China were revoked.¹³⁸ Brazil's maintenance of antidumping duties on magnesium from China would further enhance the relative attractiveness of the U.S. market to Chinese producers in the event of revocation.¹³⁹

The information available also demonstrates subject producers' likely ability to export substantial volumes of pure granular magnesium to the United States given the substantial presence of pure granular magnesium from China in the Canadian market. According to GTA data, Canada was the subject industry's largest export market for magnesium raspings, turnings and granules, and powders, including pure granulated magnesium and out-of-scope products, in each year from 2017 to 2022, indicating that subject producers have remained active in North America.¹⁴⁰ Subject producers could likely leverage their experience serving the Canadian market to increase their presence in the U.S. market if the order were revoked.

Given the foregoing, including the significant and increasing volume of subject imports during the original investigations, the Chinese industry's large capacity, including excess capacity, and export orientation, and the attractiveness of the U.S. market, we find that the

¹³⁸ See First Review Determination, USITC Pub. 3908 (Mar. 2007) at 22; Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 13.

¹³⁹ See CR/PR at I-29.

¹⁴⁰ CR/PR at Table I-9. During the period of review, Chinese exports of magnesium raspings, turnings and granules, and powders to Canada ranged from 15,971 MT to 22,600 MT annually.

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.¹⁴¹

D. Likely Price Effects

1. The Prior Proceedings

In the original investigations, the Commission found that subject imports from China were highly substitutable for domestically produced pure magnesium, particularly in the production of reagent mixtures for the desulfurization segment of the U.S. market, and that price was an important consideration in purchasing decisions. Pricing product data as well as U.S. shipment average unit values showed underselling by subject imports from China at significant margins, as well as declining prices for the domestic like product and subject imports. Subject imports from China undersold the domestic like product in all available price comparisons at average margins that increased from 49.1 percent in 1998 to 72.7 percent in 1999 and 79.5 percent in 2000. The Commission found that although most shipments of subject imports from China were to the desulfurization segment of the U.S. market, they had adverse price effects throughout the market, largely driving domestic producers out of the desulfurization segment of the U.S. market but also leading to intensified price competition in the aluminum alloying segment. Moreover, it found that the prices of subject imports from China in the desulfurization segment of the market were lower than magnesium ingot prices

¹⁴¹ There is currently a Section 301 duty of 25 percent *ad valorem* on subject imports from China. CR/PR at I-9. Given the large capacity, excess capacity, and export orientation of the subject industry, as well as the attractiveness of the U.S. market, we find that the Section 301 duty would not likely prevent subject imports from China from increasing to significant levels if the order were revoked. We also note that the record of this expedited review does not contain data concerning inventories of the subject merchandise.

across all segments of the market. For these reasons, the Commission found significant underselling by subject imports from China, and that subject imports depressed prices for the domestic like product to a significant degree.¹⁴²

In the first five-year review, the Commission observed that the domestic industry already appeared to face low and declining magnesium prices. The Commission found that subject imports would likely have adverse effects on domestic prices given the likely significant volume of subject imports from China if the order were revoked, the substitutability of domestic and subject product and importance of price in the market, the significant underselling and price effects in the original investigations, and subject imports' continued presence in the U.S. market. The Commission concluded that revocation of the order would be likely to lead to significant underselling of the domestic like product by subject imports and significant depressing or suppressing effects on domestic prices.¹⁴³

In the second five-year review, noting that the record did not contain product-specific pricing data, the Commission observed that publicly available information generally showed that domestic magnesium prices were consistently higher than magnesium prices in China and Europe during the period of review, creating an incentive for Chinese producers and exporters to undersell the domestic like product if the order were revoked. The Commission found that given the likely significant volume of subject imports, subject imports from China likely would significantly undersell the domestic like product to gain market share and likely would have

¹⁴² Original Determinations, USITC Pub. 3467 (Nov. 2001) at 19-20.

¹⁴³ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 24-25.

significant depressing or suppressing effects on the prices of the domestic like product if the order were revoked.¹⁴⁴

In the third five-year review, the Commission found that if the order were revoked, subject producers were likely to resume exporting subject merchandise to the United States at low prices in order to gain market share, as they did during the original investigations, leading to significant underselling by subject imports. Given the substitutability between subject imports and the domestic like product and the importance of price in purchasing decisions, the Commission found that the likely significant volume of low-priced subject imports would likely force the domestic industry to either lower prices or lose sales. Accordingly, it concluded that subject imports from China would likely have a significant depressing or suppressing effect on prices for the domestic like product if the order were revoked.¹⁴⁵

2. The Current Review

As discussed in section III.B.3 above, we continue to find at least a moderately high degree of substitutability between the domestic like product and subject imports and that price remains an important factor in purchasing decisions.

The record in this expedited review does not contain new product-specific pricing information. Based on the available information, we find that revocation of the order would likely result in a significant volume of subject imports that would likely undersell the domestic like product to a significant degree, as they did during the original investigations, to gain market share. Given the at least moderately high degree of substitutability between the domestic like

¹⁴⁴ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 15.

¹⁴⁵ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 20.

product and subject imports and the importance of price in purchasing decisions, the likely significant volumes of low-priced subject imports would likely force the domestic industry to lower prices, forgo needed price increases, or risk losing sales and market share to subject imports. Consequently, we find that if the order were revoked, subject imports would likely have significant price effects.

E. Likely Impact¹⁴⁶

1. The Prior Proceedings

In the original investigations, the Commission found that subject imports were having a significant adverse impact on the domestic industry. Specifically, the Commission found that significant volumes of subject imports from China at low prices displaced the domestic like product in the desulfurization segment of the market and intensified competition throughout the U.S. market, including in the aluminum alloying segment where the domestic like product also competed with imports from other countries. One domestic producer declared bankruptcy at the end of the period of investigation, another announced the closure of its production facilities in June 2001, and the condition of magnesium ingot producers declined. It also found that the grinders experienced declining performance throughout the period of investigation, although it observed that the data concerning grinders were less meaningful because they included some data for reagent production.¹⁴⁷

¹⁴⁶ In its expedited review of the antidumping duty order on pure granular magnesium from China, Commerce determined that revocation of the order would result in the continuation or recurrence of dumping, with likely margins of up to 305.56 percent. *Pure Magnesium in Granular Form From the People's Republic of China: Final Results of Expedited Fourth Sunset Review of the Antidumping Duty Order*, 88 Fed. Reg. 37014 (June 6, 2023).

¹⁴⁷ Original Determinations, USITC Pub. 3467 (Nov. 2001) at 20-22.

In the first five-year review, given the limited available industry performance data, the Commission found that it was unable to determine whether the industry was currently vulnerable.¹⁴⁸ It found that revocation of the antidumping duty order likely would lead to significant increases in the volume of subject imports from China at prices that would likely undersell the domestic like product and significantly depress U.S. prices. In addition, the likely volume and price effects of the subject imports likely would cause the domestic industry to lose market share, with a significant adverse impact on the domestic industry's production, capacity utilization, shipments, sales, and revenue levels, which in turn would have a direct adverse impact on the domestic industry's profitability and its ability to raise capital and make and maintain necessary capital investments. Accordingly, based on the limited record in the expedited review, the Commission concluded that, if the antidumping duty order were revoked, subject imports from China likely would have a significant impact on the domestic industry within a reasonably foreseeable time.¹⁴⁹

In the second five-year review, the Commission again found that the limited information on the record was insufficient to make a finding as to whether the domestic industry was vulnerable.¹⁵⁰ It found that if the order were revoked, the likely adverse volume and price effects of the subject imports would likely have a significant impact on the production, shipments, sales, market share, and revenues of the domestic industry. It observed that declines in these indicators of industry performance would have a direct adverse impact on the

¹⁴⁸ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 26-27.

¹⁴⁹ First Review Determination, USITC Pub. 3908 (Mar. 2007) at 27.

¹⁵⁰ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 17.

industry's profitability and employment, as well as its ability to raise capital, to make and maintain capital investments, and to fund research and development.¹⁵¹ While the Commission considered the role of weakened demand due to the 2009 recession and the presence of significant quantities of nonsubject imports throughout the second review, it found that the effects of these factors were not likely to sever the causal nexus between subject imports from China and their likely significant adverse impact on the domestic industry if the orders were revoked.¹⁵²

In the third five-year review, the Commission found that although the information available was insufficient for it to make a vulnerability finding, the condition of the domestic industry had improved since the original investigations, with higher capacity utilization, U.S. commercial shipments, operating income, and operating income margin in 2016 than during the original investigations.¹⁵³ The Commission found that if the order were revoked, the likely significant volume of subject imports and their price effects would negatively affect domestic capacity, production, capacity utilization, shipments, net sales values and quantities, employment levels, operating income, operating margins, and capital investments.¹⁵⁴ In considering the role of factors other than subject imports, the Commission found that the small presence of nonsubject imports would not prevent subject imports from China from entering the U.S. market at levels and prices that would cause injury to the domestic industry.¹⁵⁵ It

¹⁵¹ Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 17.

¹⁵² Second Review Determination, USITC Pub. 4350 (Sept. 2012) at 18.

¹⁵³ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 22.

¹⁵⁴ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 22.

¹⁵⁵ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 22-23.

concluded that if the antidumping duty order on pure granular magnesium from China were revoked, subject imports from China would likely have a significant impact on the domestic magnesium industry within a reasonably foreseeable time.¹⁵⁶

2. The Current Review

The record in this expedited review contains limited information concerning the domestic industry's performance since the prior five-year review.

As discussed in section III.B.2, US Magnesium declared *force majeure* and ultimately idled magnesium production after suffering a series of equipment failures beginning in 2021. Consequently, the domestic industry's performance was worse in 2022 than in any of the final years of the periods examined in the prior proceedings, according to nearly every measure.¹⁵⁷ Specifically, in 2022, the domestic industry's capacity (*** MT), production (*** MT), and U.S. shipments (*** MT) were all lower than in 2000, 2005, 2011, and 2016.¹⁵⁸ Its capacity utilization rate in 2022 (*** percent) was also lower than in 2005, 2011, and 2016.¹⁵⁹ Consistent with the domestic industry's poor operating performance, the industry's financial

¹⁵⁶ Third Review Determination, USITC Pub. 4761 (Feb. 2018) at 24.

¹⁵⁷ CR/PR at Table I-5. We note that financial data for the domestic industry are not available for 2005. The domestic industry's performance in 2022 may not be fully comparable to its performance in 2000, 2005, 2011, and 2016 due to lower data coverage of the domestic industry in this review as compared to the original investigations and first, second, and third reviews. As discussed in section III.B.1 above, data coverage of the domestic industry is *** percent of total U.S. production of the domestic like product in 2022.

¹⁵⁸ See CR/PR at Table I-5. For comparison, in 2000, the domestic industry's capacity was *** MT; its production was *** MT, its capacity utilization rate was *** percent, and its U.S. shipments were *** MT. In 2005, the domestic industry's capacity was *** MT; its production was *** MT, its capacity utilization rate was *** percent, and its U.S. shipments were *** MT. In 2011, its capacity was *** MT; its production was *** MT, its capacity utilization rate was *** percent, and its U.S. shipments were *** MT. In 2016, its capacity was *** MT; its production was *** MT, its capacity utilization rate was *** percent, and its U.S. shipments were *** MT. *Id.*

¹⁵⁹ CR/PR at Table I-5.

performance was also weaker in 2022 than in 2000, 2011, and 2016 in terms of its net sales (\$***), cost of goods sold (“COGS”) to net sales ratio (**% percent), gross profit (**%), operating income (**%), and operating margin (**% percent).¹⁶⁰ Given the domestic industry’s poor performance in 2022, after US Magnesium was forced to idle its production facility, we find that the domestic industry is vulnerable to the continuation or recurrence of material injury if the order were revoked. US Magnesium’s need to ramp up production after completion of needed repairs and to secure sales of that production to recoup its costs and return to profitability contributes to our finding of vulnerability. We note that this finding is consistent with the Commission’s finding in the recent full five-year review of the antidumping duty order on pure magnesium from China, which considered a domestic industry that was defined similarly to the domestic industry in the current review.^{161 162}

Based on the information available, we find that revocation of the order would likely result in a significant volume of subject imports that would likely undersell the domestic like product to a significant degree. Given the at least moderately high degree of substitutability between the domestic like product and subject imports and the importance of price in purchasing decisions, significant volumes of low-priced subject imports would likely capture

¹⁶⁰ CR/PR at Table I-5. In 2000, the domestic industry’s net sales were \$***, its COGS to net sales ratio was **% percent, gross profit was \$***, operating income was \$***, and its operating margin was **% percent. In 2011, its net sales were \$***, its COGS to net sales ratio was **% percent, gross profit was \$***, operating income was \$***, and its operating margin was **% percent. In 2016, its net sales were \$***, its COGS to net sales ratio was **% percent, gross profit was \$***, operating income was \$***, and its operating margin was **% percent. *Id.*

¹⁶¹ See *Pure Magnesium from China*, Inv. No. 731-TA-696 (Fifth Review), USITC Pub. 5420 (May 2023) at 40-41 (finding the domestic industry to be vulnerable).

¹⁶² Chairman Johanson notes that interested parties are not foreclosed from requesting a changed circumstances review in the event that the domestic industry’s projected recovery in production volume fails to materialize. See 19 U.S.C. 1675(b).

sales and market share from the domestic industry and/or force domestic producers to lower their prices or forgo needed price increases in order to maintain their sales, thereby depressing or suppressing prices for the domestic like product to a significant degree. The likely significant volume of subject imports and their price effects would negatively affect the domestic industry's capacity, production, capacity utilization, shipments, market share, net sales values and quantities, employment levels, operating income, operating income margins, and capital investments. Consequently, we conclude that if the order were revoked, subject imports from China would be likely to have a significant impact on the domestic industry within a reasonably foreseeable time.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports. As discussed previously, nonsubject imports comprised a small share of the U.S. market in 2022, accounting for *** percent of apparent U.S. consumption.¹⁶³ The record provides no indication that the presence of nonsubject imports would prevent subject imports from entering the U.S. market in significant quantities after revocation of the order, given the subject industry's excess capacity and export orientation, and the relative attractiveness of the U.S. market. Given the at least moderately high degree of substitutability between the subject imports and the domestic like product and the importance of price in purchasing decisions, we find it likely that the increase in low-priced subject imports would come at least partly at the expense of the domestic industry and/or depress or suppress

¹⁶³ *Derived from CR/PR at Table I-7 & note and INV-VV-063 at Table I-7.*

prices for the domestic like product. For these reasons, we find that any effects of nonsubject imports would be distinct from the likely effects attributable to the subject imports.

IV. Conclusion

For the foregoing reasons, we determine that revocation of the antidumping duty order on pure granular 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.

Information obtained in this review

Background

On February 1, 2023, 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 antidumping duty order on pure granular 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 Table I-1 presents information relating to the background and schedule of this proceeding:

Table I-1
Pure granular magnesium: Information relating to the background and schedule of this proceeding

Effective date	Action
February 1, 2023	Notice of initiation by Commerce (88 FR 6700, February 1, 2023)
February 1, 2023	Notice of institution by Commission (88 FR 6784, February 1, 2023)
May 8, 2023	Commission’s vote on adequacy
June 6, 2023	Commerce’s results of its expedited review
September 11, 2023	Commission’s determination and views

¹ 19 U.S.C. 1675(c).

² 88 FR 6784, February 1, 2023. 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 order. 88 FR 6700, February 1, 2023. 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 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. Purchaser questionnaires were sent to the five firms identified by the domestic interested parties. *** responded that they had not purchased pure granular magnesium from any source at any time since January 1, 2018. No other firms submitted a response to the Commission’s request for information. Any additional information is available in Appendix D.

Responses to the Commission’s notice of institution

Individual responses

The Commission received one submission in response to its notice of institution in the subject review. It was filed on behalf of the following entities (collectively referred to herein as “domestic interested parties”):

1. US Magnesium LLC (“US Magnesium”), a U.S. producer of the domestic like product;
2. Magpro LLC (“Magpro”), a U.S. producer of the domestic like product, and;
3. The United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, Local 8319 (“Local 8319”), a labor union which represents workers at US Magnesium.

A complete response to the Commission’s notice of institution requires that the responding interested party submit to the Commission all the information listed in the notice. Responding firms are given an opportunity to remedy or explain deficiencies in their responses and to provide clarifying details where appropriate. A summary of the number of responses and estimates of coverage for each is shown in table I-2.

Table I-2
Pure granular magnesium: Summary of responses to the Commission’s notice of institution

Interested party	Type	Number of firms	Coverage
U.S. producer	Domestic	2	***%
Labor union	Domestic	1	***%

Note: The U.S. producer coverage figure presented is the domestic interested parties’ estimate of their share of total U.S. production of pure granular magnesium in 2022. The labor union coverage figure presented is the share of total U.S. production of pure granular magnesium in 2022 represented by the workers employed in the production of pure granular magnesium at US Magnesium. Domestic interested parties’ response to the notice of institution, March 3, 2023, Attachment 8.

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 an expedited or full review from the domestic interested parties. The domestic interested parties request that the Commission conduct an expedited review of the antidumping duty order on pure granular magnesium.⁵

⁵ Domestic interested parties’ comments on adequacy, April 13, 2023, p. 8.

The original investigations

The original investigations resulted from petitions filed on October 17, 2000 with Commerce and the Commission by Magnesium Corp. of America (“Magcorp”) (predecessor firm to US Magnesium) and Local 8319,⁶ alleging that an industry in the United States was materially injured and threatened with material injury by reason of imports of pure magnesium from Israel and Russia, and pure granular magnesium from China,⁷ that were alleged to be sold in the United States at less than fair value (“LTFV”), and alleged to be subsidized by the Government of Israel.⁸ On September 27, 2001, Commerce determined that imports of pure granular magnesium from China were being sold at LTFV.⁹ The Commission determined on November 13, 2001 that the domestic industry was materially injured by reason of LTFV imports of pure granular magnesium from China.¹⁰ On November 19, 2001, Commerce issued its antidumping duty order with the final weighted-average dumping margins ranging from 24.67 to 305.56 percent.¹¹

The first five-year review

On January 5, 2007, the Commission determined that it would conduct an expedited review of the antidumping duty order on pure granular magnesium from China.¹² On February 6, 2007, Commerce determined that revocation of the antidumping duty order on pure granular

⁶ The petitions were amended on October 26, 2000, and April 20, 2001, to include the USWA International and “concerned employees of Northwest Alloys, Inc.,” respectively, as co-petitioners. Pure Magnesium from China and Israel, Investigations Nos. 701-TA-403 and 731-TA-895-896 (Final), USITC Pub. 3467, November 2001, (“Original publication”), p. I-1.

⁷ At the time of the filing of the petitions, there was an antidumping duty order in place on pure magnesium ingot from China. 60 FR 25691, May 12, 1995.

⁸ In September 2001, Commerce published notice of a negative final determination of sales at less than fair value (“LTFV”) in connection with the investigation on Russia. 66 FR 49327, September 27, 2001. Accordingly, the Commission terminated its antidumping investigation concerning pure magnesium from Russia (Inv. No. 731-TA-897 (Final)). 66 FR 50680, October 4, 2001.

⁹ 66 FR 49345, September 27, 2001.

¹⁰ Commissioners Marcia E. Miller and Jennifer A. Hillman dissented. The Commission further determined that an industry in the United States was not materially injured or threatened with material injury, and the establishment of an industry in the United States was not materially retarded, by reason of imports of pure magnesium from Israel that Commerce found to be subsidized and sold in the United States at LTFV. 66 FR 58162, November 20, 2001.

¹¹ 66 FR 57936, November 19, 2001.

¹² 72 FR 3876, January 26, 2007.

magnesium from China would be likely to lead to continuation or recurrence of dumping.¹³ On March 1, 2007, the Commission determined that material injury would be likely to continue or recur within a reasonably foreseeable time.¹⁴ Following an affirmative determination in the five-year review by Commerce and the Commission, effective March 26, 2007, Commerce issued a continuation of the antidumping duty order on pure granular magnesium from China.¹⁵

The second five-year review

On May 7, 2012, the Commission determined that it would conduct an expedited review of the antidumping duty order on pure granular magnesium from China.¹⁶ On June 5, 2012, Commerce determined that revocation of the antidumping duty order on pure granular magnesium from China would be likely to lead to continuation or recurrence of dumping.¹⁷ On September 25, 2012, the Commission determined that material injury would be likely to continue or recur within a reasonably foreseeable time.¹⁸ Following an affirmative determination in the five-year review by Commerce and the Commission, effective October 17, 2012, Commerce issued a continuation of the antidumping duty order on pure granular magnesium from China.¹⁹

The third five-year review

On December 5, 2017, the Commission determined that it would conduct an expedited review of the antidumping duty order on pure granular magnesium from China.²⁰ On January 9, 2018, Commerce determined that revocation of the antidumping duty order on pure granular magnesium from China would be likely to lead to continuation or recurrence of dumping.²¹ On February 27, 2018, the Commission determined that material injury would be likely to continue or recur within a reasonably foreseeable time.²² Following an affirmative determination in the five-year review by Commerce and the Commission, effective March 12, 2018, Commerce

¹³ 72 FR 5417, February 6, 2007.

¹⁴ 72 FR 10258, March 7, 2007.

¹⁵ 72 FR 14076, March 26, 2007.

¹⁶ 77 FR 32668, June 1, 2012.

¹⁷ 77 FR 33165, June 5, 2012.

¹⁸ 77 FR 59979, October 1, 2012.

¹⁹ 77 FR 63787, October 17, 2012.

²⁰ 83 FR 4269, January 30, 2018.

²¹ 83 FR 1017, January 9, 2018.

²² 83 FR 9337, March 5, 2018.

issued a continuation of the antidumping duty order on imports of pure granular magnesium from China.²³

Previous and related investigations

Beginning in 1991, the Commission has conducted a series of Title VII investigations and five-year reviews of existing orders on magnesium products from six countries: Canada, China, Israel, Norway, Russia, and Ukraine. Table I-3 presents information on these previous and related title VII investigations. As shown, there are currently three antidumping duty orders covering imports of magnesium products from China in effect (including the current order under review). The three antidumping duty orders in effect cover the following magnesium products: pure ingot, pure granular, and alloy.

²³ 83 FR 10676, March 12, 2018.

Table I-3**Magnesium: Previous and related Commission proceedings and status of orders**

Date	Number	Country	ITC original determination	Current status of order
1991	701-TA-309	Canada	Affirmative (pure and alloy ingot)	Order revoked after second review, effective August 16, 2005.
1991	731-TA-528	Canada	Affirmative (pure ingot)	Order revoked following NAFTA Panel remand after first review, effective August 1, 2000.
1991	701-TA-310	Norway	--	Not applicable. Investigation terminated by Commerce during preliminary phase.
1991	731-TA-529	Norway	--	Not applicable. Commerce dismissal of petition (alloy) and Commerce final negative determination (pure).
1994	731-TA-696	China	Affirmative (pure ingot)	Ongoing fifth review.
1994	731-TA-697	Russia	Affirmative (pure ingot)	Order revoked during first review, effective May 12, 2000.
1994	731-TA-698	Ukraine	Affirmative (pure ingot); Negative on remand	Order revoked after Commission's negative determination on remand, effective August 24, 1999.
2000	731-TA-895	China	Affirmative (pure granular)	Ongoing fourth review.
2000	701-TA-403	Israel	Negative	Not applicable
2000	731-TA-896	Israel	Negative	Not applicable
2000	731-TA-897	Russia	--	Not applicable. Commerce negative final determination (pure ingot and granules).
2004	731-TA-1071	China	Affirmative (alloy)	Order continued after third review, effective November 26, 2021.
2004	731-TA-1072	Russia	Affirmative (pure and alloy)	Order revoked after first review, effective April 15, 2010.
2018	701-TA-614	Israel	Negative	Not applicable
2018	731-TA-1431	Israel	Negative	Not applicable

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

Note: "Date" refers to the year in which the investigation 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 pure granular magnesium from China with the intent of issuing the final results of this review based on the facts available not later than June 1, 2023.²⁴ Commerce publishes its Issues and Decision Memoranda and its final results concurrently, accessible upon publication at <https://access.trade.gov/public/FRNoticesListLayout.aspx>. 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 pure granular magnesium from China are noted in the sections titled "The original investigations" and "U.S. imports," if applicable.

The product

Commerce's scope

Commerce has defined the scope as follows:

There is an existing AD order on pure magnesium from China.²⁵ The scope of this Order excludes pure magnesium that is already covered by the existing Order on pure magnesium in ingot form, and currently classifiable under item numbers 8104.11.00 and 8104.19.00 of the Harmonized Tariff Schedule of the United States (HTSUS).

The scope of this order includes imports of pure magnesium products, regardless of chemistry, including, without limitation, raspings, granules, turnings, chips, powder, and briquettes, except as noted above.

Pure magnesium includes: (1) Products that contain at least 99.95 percent primary magnesium, by weight (generally referred to as "ultra pure" magnesium); (2) products that contain less than 99.95 percent but not

²⁴ Letter from Eric Greynolds, Director, Office IV, AD/CVD Operations, Enforcement and Compliance, U.S. Department of Commerce to Nannette Christ, Director of Investigations, March 23, 2023.

²⁵ 60 FR 25691, May 12, 1995.

less than 99.8 percent primary magnesium, by weight (generally referred to as “pure” magnesium); (3) chemical combinations of pure 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”²⁶ (generally referred to as “off specification pure” magnesium); and (4) physical mixtures of pure magnesium and other material(s) in which the pure magnesium content is 50 percent or greater, but less than 99.8 percent, by weight.

Excluded from this Order are mixtures containing 90 percent or less pure magnesium by weight and one or more of certain non-magnesium granular materials to make magnesium-based reagent mixtures. The non-magnesium granular materials of which Commerce is aware used to make such excluded reagents are: Lime, calcium metal, calcium silicon, calcium carbide, calcium carbonate, carbon, slag coagulants, fluorspar, nepheline syenite, feldspar, aluminum, alumina (Al₂O₃), calcium aluminate, soda ash, hydrocarbons, graphite, coke, silicon, rare earth metals/mischmetal, cryolite, silica/fly ash, magnesium oxide, periclase, ferroalloys, dolomitic lime, and colemanite. A party importing a magnesium-based reagent which includes one or more materials not on this list is required to seek a scope clarification from Commerce before such a mixture may be imported free of antidumping duties.²⁷

²⁶ The meaning of this term is the same as that used by the American Society for Testing and Materials in its Annual Book of ASTM Standards: Volume 01.02 Aluminum and Magnesium Alloys.

²⁷ 83 FR 10676, March 12, 2018.

U.S. tariff treatment

Pure granular magnesium is currently provided for in Harmonized Tariff Schedule of the United States (“HTS”) subheading 8104.30.00. The general rate of duty is 4.4 percent ad valorem for HTS subheading 8104.30.00.²⁸ Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Effective September 24, 2018, pure granular magnesium originating in China was subject to an additional 10 percent ad valorem duty under section 301 of the Trade Act of 1974. Effective May 10, 2019, the section 301 duty for pure granular magnesium was increased to 25 percent.²⁹

Description and uses³⁰

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 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 categories, pure and alloy.

²⁸ HTSUS (2023) Revision 4, USITC Publication 5424, April 2023, p. 81-4.

²⁹ 83 FR 47974, September 21, 2018; 84 FR 20459, May 9, 2019. See also HTS headings 9903.88.03 and 9903.88.04 and U.S. notes 20(e)–20(g) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. HTSUS (2023) Revision 4, USITC Publication 5424, April 2023, pp. 99-III-27–99-III-52, 99-III-297–99-III-298. Goods exported from China to the United States prior to May 10, 2019, and entering the United States prior to June 1, 2019, were not subject to the escalated 25 percent duty (84 FR 21892, May 15, 2019).

³⁰ Unless otherwise noted, this information is based on Pure Granular Magnesium from China, Investigation No. 731-TA-895 (Third Review), USITC Publication 4761, February 2018 (“Third review publication”), pp. I-15-I-19.

Pure magnesium

Pure magnesium in unwrought form³¹ contains at least 99.8 percent magnesium by weight.³² 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 metals, such as aluminum. Pure magnesium is typically sold to end users who then combine it with other elements for use in a final product. Pure magnesium is used in the production of aluminum alloys for use in die cast automotive parts, in beverage cans, 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.

Pure magnesium is typically sold directly to end users, although pure magnesium used for iron and steel desulfurization is subjected to further processing before being consumed by iron and steel mills.

Alloy magnesium

Nonsubject 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 magnesium by weight, 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.³³ It is principally used in structural

³¹ “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 the magnesium to produce extrusions, rolled product, forgings, etc.

³² 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.

³³ 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.

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. In contrast, pure magnesium is not used in structural applications because its tensile and yield strengths are low.

Primary versus secondary magnesium

Primary magnesium refers to unwrought magnesium metal shapes (typically ingots) which are produced by decomposing raw materials into magnesium metal. Secondary magnesium is pure or alloy magnesium that is produced by recycling magnesium-based scrap. Magnesium alloys can be recycled back into products displaying the same chemical, physical, and mechanical characteristics as primary metal.³⁴

Magnesium 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. 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.

³⁴ International Magnesium Association. "Recycling Magnesium." Accessed March 20, 2023. https://www.intlimg.org/page/sustain_recycle_ima.

“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.

Granular magnesium

Magnesium may be either cast or granular. Cast magnesium is the solid, cooled form (as ingots) of molten magnesium metal. Granular magnesium is cast magnesium that has been ground, chipped, crushed, machined, or atomized into raspings, granules, turnings, chips, powder, or briquettes and is different from cast magnesium in size, dimensions, and shape. Granular magnesium includes all non-molten physical forms of magnesium other than castings. Although the chemical compositions of cast magnesium and granular magnesium are identical since granular magnesium is typically ground from cast magnesium, granular magnesium is much more volatile than cast magnesium. Granular magnesium may be either pure or magnesium alloy. However, based on information obtained in the previous investigations of granular magnesium imported from China, granular magnesium is typically pure magnesium or “off specification” pure magnesium (magnesium alloy not meeting ASTM specifications for magnesium alloy). 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.³⁵ Lesser amounts of granular magnesium are used in defense applications, such as military ordnance and flares.

³⁵ 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 process³⁶

Primary magnesium

Worldwide, most magnesium is derived from magnesium-bearing ores (dolomite, magnesite, brucite, and olivine) or seawater and well and lake brines. 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. In the United States, US Magnesium produces primary magnesium by extracting magnesium from brines of the surface waters of the Great Salt Lake in Utah.

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 U.S. production. The silicothermic process (also known as the Pidgeon process) is used by most of the producers in China. The silicothermic process is a relatively easy operation as it does not require a highly trained work force or sophisticated engineering, it is easy to adjust production to meet demand, and it only requires a small amount of capital cost compared to electrolytic processes.³⁷ However, it requires more labor and energy than the electrolytic process while producing more waste and greenhouse gas emissions.³⁸

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.³⁹ The metal rises to the surface where it is guided into storage wells and cast into ingots.

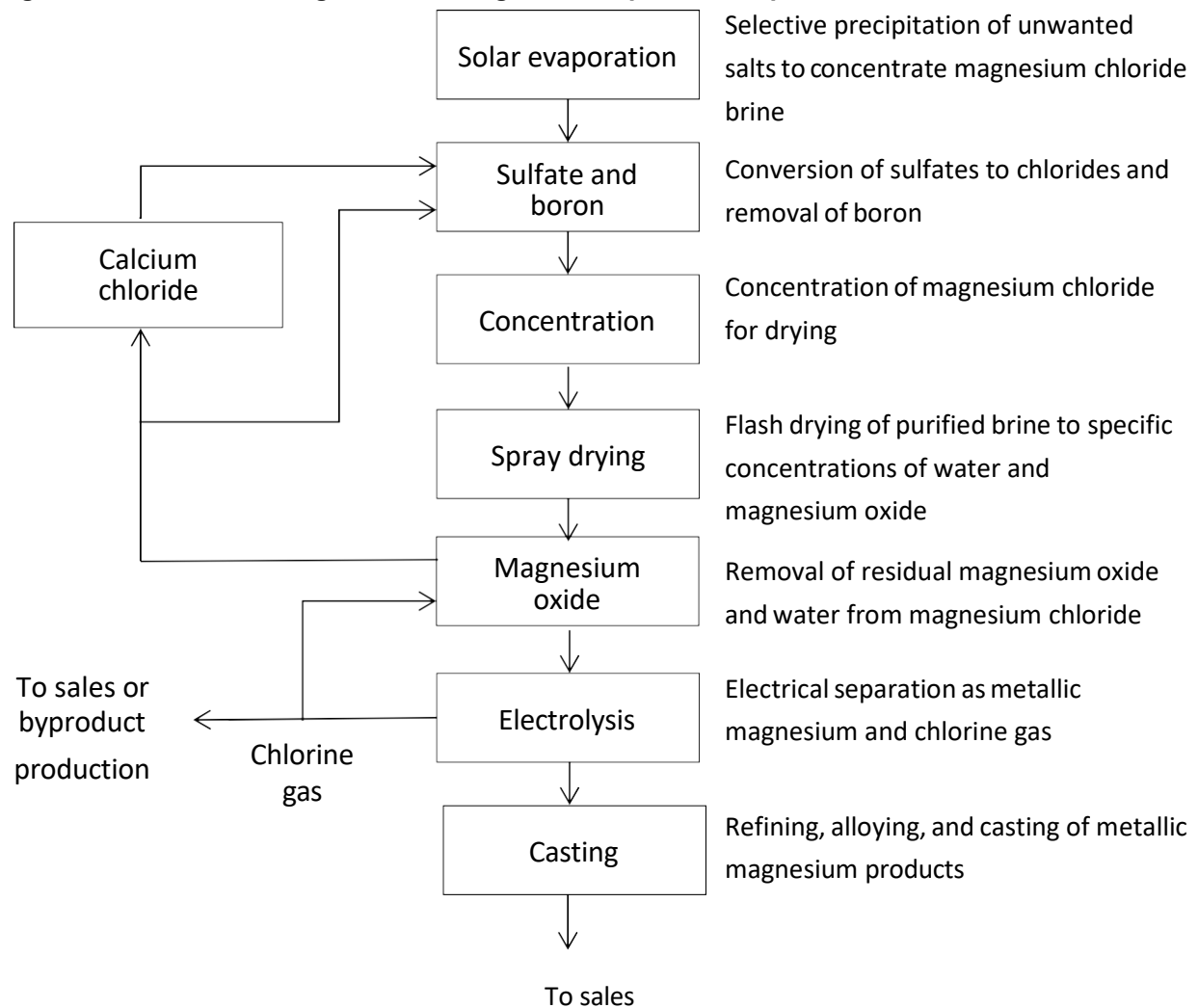
³⁶ Unless otherwise noted, this information is based on third review publication, pp. I-18-I-22.

³⁷ Wulandari, Winny, Brooks, Geoffrey, Rhamdhani, Muhammad, and Monaghan, Brian, "Magnesium: current and alternative production routes," 2010, <https://ro.uow.edu.au/engpapers/1254>, retrieved April 4, 2023.

³⁸ Baker, Phillip, "Pidgeon or Electrolytic Technology: The Choice for Modern China," International Magnesium Association Conference, May 2016, <https://www.researchgate.net/publication/304582678>, retrieved April 4, 2023.

³⁹ 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: Third review publication, figure I-1.

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. Most pure magnesium ingots are sold in standard bar sizes ranging in weight from 12 to 500 pounds per bar. 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 powder⁴⁰ 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, and/or recycle scrap magnesium generated in their die casting operations into secondary alloy magnesium. The production facilities, processes, and employees of cast and granular magnesium do not overlap. Primary and secondary producers of cast magnesium in ingot form extract magnesium from raw materials or scrap and cast it into magnesium ingots or slabs. Granular production facilities (known as "grinders") purchase cast magnesium in ingot form, transform the physical shape by grinding it, and then sell powdered/granule magnesium to end users.

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.

⁴⁰ Magnesium chips are ground into powder using a particle reduction process. Magnesium powder can also be produced by atomization (spraying through nozzles) of molten pure magnesium; however, this technique is less frequently used than grinding.

Secondary magnesium

Secondary magnesium is produced from recycling magnesium-based scrap. Magnesium scrap arrives at the recycler either in a loose form or contained in boxes. There are many methods that can be used for recycling, including flux refining after melting, fluxless melting and settling, or fluxless melting and gas sparging. In the melting step, the recycler separates the magnesium from other alloys and heats it in a steel crucible to around 700 degrees Celsius. A salt flux, if used, is added to agglomerate to the impurities which are then removed as a sludge. The fluxless settling method uses molten salt, particle sedimentation, and adhesion to clean the magnesium metal as it moves through a series of furnace chambers. In gas sparging, a surface gas such as argon is used to remove small impurities while filtering is used to remove large impurities. Since no salt is used in this method, it can result in high-purity magnesium alloys.⁴¹ 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.⁴²

⁴¹ Bell, S., Boyd Davis, Amjad Javaid, and E. Essadiqi. "Final Report on Refining Technologies of Magnesium," March 1, 2006, pp. 1-9, https://www.researchgate.net/publication/242158707_Final_Report_on_Refining_Technologies_of_Magnesium, retrieved April 4, 2023.

⁴² 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.

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 two pure magnesium ingot producers (Magcorp (predecessor to US Magnesium) and Northwest Alloys, Inc. (“Northwest Alloys”)) representing 100 percent of U.S. production in 2000,⁴³ and five pure granular magnesium producers (i.e., “grinders”)⁴⁴ representing nearly all U.S. production of pure granular magnesium in 2000.⁴⁵ During the first five-year review, the Commission received one response to the notice of institution from US Magnesium--the only producer of primary pure (and alloy) magnesium in the United States at that time.⁴⁶

⁴³ Northwest Alloys, a subsidiary of Alcoa Inc., Pittsburgh, Pennsylvania, produced magnesium for captive consumption in its aluminum operations; however, it ceased production of magnesium in October 2001.

⁴⁴ Magnesium grinders in the United States may purchase magnesium ingot, slab, or granules (typically pure magnesium), and grind magnesium for use in the production of reagents or other magnesium-containing products.

⁴⁵ Original publication, p. III-1. See also Pure Magnesium from China, Investigation No. 731-TA-895 (First Review), USITC Publication 3908, March 2007 (“First review publication”), pp. I-18-I-19.

⁴⁶ US Magnesium identified four U.S. grinders in its response in the first review. First review publication, p. I-20. Based on a definition of the domestic like product that encompassed both primary pure and alloy magnesium (in both ingot and granular forms) and secondary alloy magnesium and based on the treatment of magnesium shipments as production by US Magnesium, US Magnesium accounted for *** percent of U.S. production in 2005; if the volume shipped by US Magnesium to U.S. grinders is treated as production by the U.S. grinders, rather than production by US Magnesium, US Magnesium accounted for *** percent of U.S. production of the domestic like product. Pure Magnesium from China, Investigation No. 731-TA-895 (Review), Confidential Report, INV-EE-009, February 1, 2007 (“First review confidential report”), pp. I-3-I-4.

During the second five-year review, the Commission received one response to the notice of institution from US Magnesium, which accounted for approximately *** percent of total production of the domestic like product in the United States during 2011.⁴⁷ During the third five-year review, the Commission received one response to the notice of institution from US Magnesium, which accounted for approximately *** percent of the domestic like product in the United States during 2016.⁴⁸

In response to the Commission's notice of institution in this current review, the domestic interested parties provided a list of eight known and currently operating U.S. producers of the domestic like product. Two firms, US Magnesium and Magpro, provided U.S. industry data in response to the Commission's notice of institution, accounting for approximately *** percent of production of the domestic like product in the United States during 2022.⁴⁹

⁴⁷ The coverage figure presented, as provided by US Magnesium in its response in the second review, represents the firm's share of total U.S. production during 2011, including primary and secondary magnesium ingot produced in the United States, as well as the granular magnesium produced from non-US Magnesium produced magnesium ingot. Granular magnesium produced from magnesium ingot supplied by US Magnesium was not included so as to avoid double counting. Although US Magnesium did not consider die casters which recycle their own scrap to be domestic producers of magnesium, it included estimates of its recycled product in the estimated total domestic production. Investigation No. 731-TA-895 (Second Review): Pure Magnesium (Granular) from China, Confidential Report, INV-KK-086, August 10, 2012 ("Second review confidential report"), p. I-41. US Magnesium's response also contained certain information it received from domestic grinders ESM Special Metals & Technology, Inc. ("ESM"), Reade Manufacturing Co., and Hart Metals Inc., reporting that these U.S. grinders were in support of the continuation of the antidumping duty order on pure magnesium in granular form from China during the second review. Pure Magnesium (Granular) from China, Investigation No. 731-TA-895 (Second Review), USITC Publication 4350, September 2012 ("Second review publication"), p. I-3.

⁴⁸ US Magnesium based its coverage estimate on the primary and secondary magnesium ingot produced in the United States, as well as the granular magnesium produced from non-US Magnesium produced magnesium ingot. Granular magnesium produced from magnesium ingot supplied by US Magnesium was not included so as to avoid double counting. US Magnesium included estimates of its recycled product in the estimated total production. Investigation No. 731-TA-895 (Third Review): Pure Granular Magnesium from China, Confidential Report, INV-PP-151, November 21, 2017 (as amended in INV-PP-157, December 4, 2017) ("Third review confidential report"), p. I-5.

⁴⁹ Domestic interested parties' response to the notice of institution, March 1, 2023, att. 9.

Recent developments

Table I-4 presents events in the U.S. industry since the Commission's last five-year review.⁵⁰

Table I-4
Pure magnesium: Developments in the U.S. industry

Item	Firm	Event
Equipment failure	US Magnesium	US Magnesium suffered equipment failure in September 2021 at its plant in Utah and declared force majeure. The shutdown of capacity in Utah was cited as the reason for the average price of imports into the United States increasing to \$5.13 per pound at the end of September 2021 and \$7.63 per pound at the end of October 2021.
Input (chlorine) shortage	US Magnesium	The closure of multiple chlorine manufacturing facilities in 2021 led to extended lead times to purchase chlorine supplies of as much as 50 percent. It also led to reduced product allocation for customers in an attempt to keep all critical customers (primarily water and wastewater systems) in operation. The nation's second-largest manufacturer of dry chlorine products, BioLab in Westlake, Louisiana, announced in November 2022 that it was on track to reopen its hurricane-damaged facilities by summer 2023.
Permit denied	US Magnesium	The Utah Division of Environmental Quality denied a request in December 2022 from US Magnesium to dredge and extend its intake canals from the Great Salt Lake. Declining water levels after several years of drought threatened to disrupt production. US Magnesium can reapply with more detail about water impacts and undergo another public comment period.

Source: "Mineral Commodity Summaries: Magnesium Metal," U.S. Geological Survey, January 2022, <https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-magnesium-metal.pdf>, retrieved April 4, 2023; "BioLab Plant Reopening Will Impact Chlorine Prices for 2023," PoolMagazine (blog), November 4, 2022, <https://www.poolmagazine.com/cleaning/biolab-plant-reopening-will-impact-chlorine-prices-for-2023/>, retrieved April 4, 2023; Larson, Leia, "Utah DEQ denies US Magnesium's request to extend water canals deeper into the Great Salt Lake," The Salt Lake Tribune, December 29, 2022, <https://www.sltrib.com/news/environment/2022/12/29/utah-deq-denies-us-magnesiums/>, retrieved April 4, 2023.

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.⁵¹ Table I-5 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.

⁵⁰ For recent developments, if any, in tariff treatment, please see "U.S. tariff treatment" section.

⁵¹ Individual company trade and financial data are presented in app. B.

Table I-5
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	2000	2005	2011	2016	2022
Capacity	Quantity	***	***	***	***	***
Production	Quantity	***	***	***	***	***
Capacity utilization	Ratio	***	***	***	***	***
U.S. shipments	Quantity	***	***	***	***	***
U.S. shipments	Value	***	***	***	***	***
U.S. shipments	Unit value	***	***	***	***	***
Net sales	Value	***	See note	***	***	***
COGS	Value	***	See note	***	***	***
COGS to net sales	Ratio	***	See note	***	***	***
Gross profit or (loss)	Value	***	See note	***	***	***
SG&A expenses	Value	***	See note	***	***	***
Operating income or (loss)	Value	***	See note	***	***	***
Operating income or (loss) to net sales	Ratio	***	See note	***	***	***

Source: For the years 2000, 2005, 2011, and 2016, data are compiled using data submitted in the Commission's original investigations and subsequent five-year reviews. ***. For the year 2022, data are compiled using data submitted by domestic interested parties. Domestic interested parties' response to the notice of institution, March 3, 2023, att. 8.

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

Note: Except as otherwise indicated in the following notes, the data presented for the original investigations (2000) and the first review (2005) are for pure magnesium ingot; data presented for the second review (2011), third review (2016), and current fourth review (2022) include all pure and alloy magnesium whether in ingot or granular form. Original confidential report, table C-1; first review confidential report, table I-7; second review confidential report, table I-5; third review confidential report, app. B; and domestic interested parties' response to the notice of institution, March 3, 2023, att. 8.

Note: The 2005 capacity and capacity utilization data presented are for both pure and alloy magnesium, whereas the 2005 production and shipment data presented are for pure magnesium. ***. Data presented for 2005 also include magnesium in granular form produced by US Magnesium. There were *** such sales during the original investigations. Financial data for 2005 are not available.

Note: The 2011 data presented are reported by US Magnesium; 2011 data separately reported by ESM-SMT for the domestic like product are not included in the aggregate, as to do so would result in double-counting granular magnesium produced from magnesium ingot supplied to ESM-SMT by US Magnesium.

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 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.⁵²

In its original determination, the Commission defined one domestic like product—pure magnesium that included both granular magnesium and magnesium ingot. Two Commissioners defined the domestic like product differently in the original determination. They found two domestic like products corresponding to granular pure magnesium and pure magnesium ingot. In its expedited first, second, and third five-year review determinations, the Commission found one domestic like product to include primary and secondary pure and alloy magnesium whether in (cast) ingot or granular form. One Commissioner defined the domestic like product differently in the expedited first five-year review, instead finding that pure magnesium and alloy magnesium (including secondary magnesium) were separate domestic like products.

In its original determination, the Commission defined the domestic industry as producers of pure magnesium, including grinders. One Commissioner defined the domestic industry differently in the original determination (i.e., not including grinders), and two Commissioners defined two separate domestic industries (i.e., domestic producers of granular pure magnesium and domestic producers of pure magnesium ingot, including grinders). The Commission also found that appropriate circumstances existed to exclude one firm from the domestic industry. In its expedited first, second, and third five-year review determinations, the Commission defined the domestic industry as domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form. The Commission also included grinders in the domestic industry producing magnesium in its first, second, and third five-year review determinations. One Commissioner defined the domestic industry differently in the first five-year review, instead finding that grinders were not included in the domestic industry. Another Commissioner defined the domestic industry differently in the first five-year review, instead finding that there was one

⁵² Section 771(4)(B) of the Tariff Act of 1930, 19 U.S.C. § 1677(4)(B).

domestic industry composed of the domestic producers of pure magnesium whether in ingot or granular form, including grinders.⁵³

U.S. importers

During the final phase of the original investigations, the Commission received U.S. importer questionnaires from five firms that imported the subject merchandise from China.⁵⁴ The Commission did not receive responses to its notice of institution from any respondent interested parties in any subsequent five-year review proceedings. During the first five-year review, US Magnesium indicated in its response to the Commission's notice of institution that it did not have information on firms that imported the subject merchandise from China at that time.⁵⁵ In its response to the Commission's notice of institution in the second five-year review, US Magnesium listed three U.S. importers of the subject merchandise from China: Seychelle Environmental Technologies, Rossborough, and ESM.⁵⁶ In its response to the Commission's notice of institution in the third five-year review, US Magnesium listed five U.S. importers of the subject merchandise from China: Seychelle Environmental Technologies, Rossborough, ESM, United States Steel, and Odermath (USA), Inc.⁵⁷ In its response to the Commission's notice of institution in this current fourth review, the domestic interested parties provided a list of three potential U.S. importers of the subject merchandise.⁵⁸ Import data presented for the original investigations and all subsequent five-year reviews are based on official Commerce statistics.⁵⁹

⁵³ 88 FR 6784, February 1, 2023.

⁵⁴ Original publication, table IV-1.

⁵⁵ First review publication, p. I-30.

⁵⁶ Second review publication, p. I-37.

⁵⁷ Third review publication, p. I-27.

⁵⁸ Domestic interested parties' response to the notice of institution, March 1, 2023, att. 10.

⁵⁹ Original publication, p. IV-1; first review publication, fig. I-1 and table I-8; second review publication, table I-8; and third review publication, table I-4.

U.S. imports

Table I-6 presents the quantity, value, and unit value of U.S. imports of the subject merchandise from China, as well as from the other top sources of U.S. imports (shown in descending order of 2022 imports by quantity).

Table I-6
Pure granular magnesium: U.S. imports, by source and period

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

U.S. imports from	Measure	2018	2019	2020	2021	2022
China	Quantity	400	---	6	0	3
Taiwan	Quantity	---	289	489	649	864
Austria	Quantity	579	430	949	724	853
Turkey	Quantity	15	151	---	---	178
All other sources	Quantity	943	943	657	182	67
Nonsubject sources	Quantity	1,538	1,813	2,095	1,555	1,962
All import sources	Quantity	1,938	1,813	2,101	1,555	1,964
China	Value	1,009	---	27	12	45
Taiwan	Value	---	1,127	1,880	2,880	10,324
Austria	Value	2,747	2,291	4,125	3,568	7,903
Turkey	Value	62	458	---	---	2,040
All other sources	Value	4,728	4,877	4,094	1,192	2,494
Nonsubject sources	Value	7,537	8,752	10,098	7,640	22,761
All import sources	Value	8,545	8,752	10,125	7,652	22,806
China	Unit value	2,523	---	4,500	---	15,000
Taiwan	Unit value	---	3,900	3,845	4,438	11,949
Austria	Unit value	4,744	5,328	4,347	4,928	9,265
Turkey	Unit value	4,133	3,033	---	---	11,461
All other sources	Unit value	5,014	5,170	6,234	6,548	37,224
Nonsubject sources	Unit value	4,901	4,827	4,820	4,913	11,601
All import sources	Unit value	4,409	4,827	4,819	4,921	11,612

Source: Compiled from official Commerce statistics for HTS statistical reporting number 8104.30.0000, accessed April 4, 2023.

Note: Because of rounding, figure may not add to total shown. Zeroes indicate data greater than zero, but less than one full quantity/value unit, and “---” indicates no available data.

Apparent U.S. consumption and market shares

Table I-7 presents data on U.S. producers' U.S. shipments, U.S. imports, apparent U.S. consumption, and market shares.

Table I-7

Pure magnesium ingot: Apparent U.S. consumption and market shares, by source and period

Quantity in metric tons; value in 1,000 dollars; shares in percent

Source	Measure	2000	2005	2011	2016	2022
U.S. producers	Quantity	***	***	NA	NA	NA
China	Quantity	244	NA	NA	NA	NA
Israel	Quantity	6,317	NA	NA	NA	NA
Other sources	Quantity	16,372	NA	NA	NA	NA
All import sources	Quantity	22,933	31,222	NA	NA	NA
Apparent U.S. consumption	Quantity	***	***	NA	NA	NA
U.S. producers	Value	***	NA	NA	NA	NA
China	Value	345	NA	NA	NA	NA
Israel	Value	19,304	NA	NA	NA	NA
Other sources	Value	42,896	NA	NA	NA	NA
All import sources	Value	62,545	NA	NA	NA	NA
Apparent U.S. consumption	Value	***	NA	NA	NA	NA
U.S. producers	Share of quantity	***	NA	NA	NA	NA
China	Share of quantity	***	NA	NA	NA	NA
Israel	Share of quantity	***	NA	NA	NA	NA
Other sources	Share of quantity	***	NA	NA	NA	NA
All import sources	Share of quantity	***	NA	NA	NA	NA
U.S. producers	Share of value	***	NA	NA	NA	NA
China	Share of value	***	NA	NA	NA	NA
Israel	Share of value	***	NA	NA	NA	NA
Other sources	Share of value	***	NA	NA	NA	NA
All import sources	Share of value	***	NA	NA	NA	NA

Table continued.

Table I-7--Continued**Pure granular magnesium: Apparent U.S. consumption and market shares, by source and period**

Quantity in metric tons; value in 1,000 dollars; shares in percent

Source	Measure	2000	2005	2011	2016	2022
U.S. producers	Quantity	***	***	NA	NA	NA
China	Quantity	15,262	1,484	NA	NA	NA
Israel	Quantity	0	NA	NA	NA	NA
Subtotal	Quantity	15,262	NA	NA	NA	NA
Other sources	Quantity	6,097	1,027	NA	NA	NA
All import sources	Quantity	21,359	2,510	NA	NA	NA
Apparent U.S. consumption	Quantity	***	***	NA	NA	NA
U.S. producers	Value	***	NA	NA	NA	NA
China	Value	33,527	NA	NA	NA	NA
Israel	Value	0	NA	NA	NA	NA
Subtotal	Value	33,527	NA	NA	NA	NA
Other sources	Value	13,031	NA	NA	NA	NA
All import sources	Value	46,558	NA	NA	NA	NA
Apparent U.S. consumption	Value	***	NA	NA	NA	NA
U.S. producers	Share of quantity	***	NA	NA	NA	NA
China	Share of quantity	***	***	NA	NA	NA
Israel	Share of quantity	***	NA	NA	NA	NA
Subtotal	Share of quantity	***	NA	NA	NA	NA
Other sources	Share of quantity	***	***	NA	NA	NA
All import sources	Share of quantity	***	***	NA	NA	NA
U.S. producers	Share of value	***	***	NA	NA	NA
China	Share of value	***	***	NA	NA	NA
Israel	Share of value	***	NA	NA	NA	NA
Subtotal	Share of value	***	NA	NA	NA	NA
Other sources	Share of value	***	***	NA	NA	NA
All import sources	Share of value	***	***	NA	NA	NA

Table continued.

Table I-7--Continued**All magnesium: Apparent U.S. consumption and market shares, by source and period**

Quantity in metric tons; value in 1,000 dollars; shares in percent

Source	Measure	2000	2005	2011	2016	2022
U.S. producers	Quantity	NA	NA	***	***	***
China (subject pure granular magnesium)	Quantity	NA	NA	3,283	860	3
Other sources (nonsubject and out-of-scope)	Quantity	NA	NA	23,260	1,344	41,818
All import sources	Quantity	NA	NA	26,543	2,204	41,821
Apparent U.S. consumption	Quantity	NA	NA	***	***	***
U.S. producers	Share of quantity	NA	NA	***	***	***
China (subject pure granular magnesium)	Share of quantity	NA	NA	***	***	***
Other sources (nonsubject and out-of-scope)	Share of quantity	NA	NA	***	***	***
All import sources	Share of quantity	NA	NA	***	***	***

NA = data are not available.

Source: For the years 2000, 2005, 2011, and 2016, data are compiled using data submitted in the Commission's original investigations and subsequent five-year reviews (Original confidential report, tables C-1 and C-2; first review confidential report, tables I-9 and I-10; second review confidential report, table I-9; third review confidential report, tables I-5 and I-6). For the year 2022, U.S. producers' U.S. shipments are compiled from the domestic interested parties' response to the Commission's notice of institution and U.S. imports are compiled using official Commerce statistics under HTS subheadings 8104.11.00, 8104.30.00, and 8104.19.00 for pure magnesium ingot, pure granular magnesium, and alloy magnesium, respectively, accessed April 4, 2023.

Note: U.S. import data presented for "other sources (nonsubject and out-of-scope)" for the third review (2016 data) are understated, as they include only imports from nonsubject sources under HTS subheading 8104.30.00 for pure granular magnesium. Thus, the total magnesium apparent U.S. consumption calculation for 2016 is also understated.

Note: In 2022, merchandise imported from nonsubject sources under HTS subheadings 8104.11.00 (pure magnesium ingot), 8104.19.00 (alloy magnesium), and 8104.30.00 (pure granular magnesium) totaled 6,946 metric tons, 28,751 metric tons, and 1,962 metric tons, respectively, and together accounted for *** percent of total apparent U.S. consumption of all magnesium, respectively. Out-of-scope imports from China in 2022 under HTS subheadings 8104.11.00 and 8104.19.00 totaled 3,913 metric tons and 247 metric tons, respectively, and together accounted for *** percent of total apparent U.S. consumption of all magnesium, respectively.

Note: 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.

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

The industry in China

Producers in China

During the final phase of the original investigations, there were estimated to be 84 magnesium metal-producing plants in China.⁶⁰ The Commission received foreign producer/exporter questionnaires from two producers of pure magnesium in China during the original investigations, ***.⁶¹ The Commission did not receive responses to its notice of institution from any respondent interested parties in any subsequent five-year review proceedings. During the first five-year review, the domestic interested party indicated in its response to the notice of institution that it did not have information on producers that currently export Chinese-manufactured granular magnesium to the United States but that the Chinese magnesium industry had developed very rapidly since the original investigations and most of the world's supply of magnesium was produced in China at that time.⁶² During the second five-year review, the domestic interested party provided a list of eight possible producers of pure granular magnesium in China.⁶³ During the third five-year review, the domestic interested party provided a list of nine possible producers of pure granular magnesium in China.⁶⁴

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 four possible producers of pure granular magnesium in China.⁶⁵

⁶⁰ Original publication, p. VII-1.

⁶¹ Investigation Nos. 701-TA-403 and 731-TA-895-896 (Final): Pure Magnesium from China and Israel, Confidential Report, INV-Y-219, October 24, 2001, as amended in INV-Y-222, October 25, 2001 ("Original confidential report"), table VII-1.

⁶² First review publication, p. I-40.

⁶³ Second review publication, p. I-49.

⁶⁴ Third review publication, p. I-33.

⁶⁵ Domestic interested parties' response to the notice of institution, March 3, 2023, att. 11.

Recent developments

Table I-8 presents events in the Chinese industry since the Commission's last five-year review.

Table I-8
Pure magnesium: Developments in the Chinese industry

Item	Firm	Event
Smelters closed	Magnesium smelting enterprises in Yulin, Fugu County, Shaanxi province, China	In August and September of 2021, the local government of the area of Yulin in Shaanxi province ordered 35 of about 50 magnesium smelters closed until the end of the year and the rest to cut production by fifty percent in order to meet energy use requirements.
Tax reduction	Western China	China announced that it would remove a 15 percent tax on magnesium produced in certain areas of the western part of the country, effective March 1, 2021. The tax exemption was part of a policy to encourage development of the magnesium industry in the western part of China and increase consumption.
Expansion	Yunhai Special Metals	Yunhai Special Metals announced in 2022 a plan to spend 4.7 billion yuan (\$656 million) to build four new magnesium projects, including a project in Shanxi province to increase annual output by 100,000 metric tons.

Source: Hume, Neil, "China's magnesium shortage threatens global car industry," Financial Times, October 19, 2021, <https://www.ft.com/content/1611e936-08a5-4654-987e-664f50133a4b>, retrieved April 4, 2023; "Fugu develops 'magnesium' business and continues to write a new chapter in the industry," INEWS, March 5, 2022, <https://inf.news/en/economy/0ca2dfe5f218de659374b873edf21970.html>, retrieved April 4, 2023; "Mineral Commodity Summaries: Magnesium Metal," U.S. Geological Survey, January 2022, <https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-magnesium-metal.pdf>, retrieved April 4, 2023; Shihua, Tang, "China's Yunhai Special Metals Jumps on USD656 Million Capacity Expansion Plans," Yicai Global, November 25, 2022, <https://www.yicaiglobal.com/news/china-yunhai-special-metals-jumps-on-usd656-million-capacity-expansion-plans>, retrieved April 4, 2023.

Exports

Table I-9 presents export data for magnesium raspings, turnings and granules, and powders, a category that includes pure granular magnesium and out-of-scope products, from China (by export destination in descending order of quantity for 2022). Canada was the leading destination for exports in each year between 2017 and 2022.

Table I-9
Magnesium raspings, turnings and granules, and powders: Quantity of exports from China, by destination and period

Quantity in metric tons

Destination market	2017	2018	2019	2020	2021	2022
Canada	22,600	20,441	22,222	16,955	21,385	15,971
Netherlands	16,522	13,904	16,627	12,089	15,459	10,985
Turkey	9,303	9,407	11,088	9,598	7,949	10,440
India	8,875	7,507	8,064	7,353	6,125	7,498
Slovakia	72	808	3,161	2,454	6,024	5,616
Japan	5,398	4,980	4,860	3,502	3,933	3,473
South Africa	3,978	3,230	3,058	2,904	3,125	2,957
United Kingdom	2,816	2,328	2,640	1,954	1,704	1,858
Poland	1,704	1,608	1,682	1,063	1,010	1,680
Portugal	0	0	0	740	620	1,120
All other markets	14,031	14,148	10,932	10,307	9,599	8,087
All markets	85,299	78,362	84,333	68,920	76,934	69,686

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

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 8104.30, accessed March 30, 2023. These data may be overstated as HS subheading 8104.30 may contain products outside the scope of this review.

Third-country trade actions

In October 2004, Brazil imposed antidumping duties of \$0.99 per kilogram on magnesium granules from China classified in HS subheadings 8104.30 and 8104.90. Subsequently, Brazil conducted three reviews, with the most recent review in 2021. In July 2022, Brazil determined that the duties would be maintained. The current Brazilian antidumping duties on magnesium granules are \$0.99 per kilogram (\$0.449 per pound).⁶⁶

⁶⁶ World Trade Organization (WTO), Committee on Anti-Dumping Practices, Semi-annual Report Under Article 16.4 of the Agreement, Brazil, G/ADP/N/377/BRA, March 16, 2023, p. 4.

The global market

Table I-10 presents global export data for magnesium raspings, turnings and granules, and powders, a category that includes pure granular magnesium and out-of-scope products, (by source in descending order of quantity for 2022). China is the largest exporter of magnesium raspings, turnings and granules, and powders, accounting for 75.5 percent of global exports during 2022. The Netherlands and Germany are the second and third largest exporters, by quantity.

Table I-10
Pure granular magnesium: Quantity of global exports by country and period

Quantity in metric tons

Exporting country	2017	2018	2019	2020	2021	2022
China	85,299	78,362	84,333	68,920	76,934	69,686
Netherlands	6,609	6,466	13,690	12,602	8,987	5,398
Germany	5,570	4,506	4,664	3,936	4,769	4,545
Slovakia	235	266	532	1,189	2,734	3,726
Turkey	1,303	1,332	2,553	2,729	2,580	2,889
Russia	966	885	1,064	1,276	834	1,595
United States	198	537	569	593	572	930
Romania	742	1,097	783	777	750	828
Slovenia	460	621	1,077	940	788	795
Poland	656	440	612	352	550	613
All other exporters	5,193	4,960	5,228	4,991	4,712	1,335
All exporters	107,231	99,470	115,105	98,306	104,211	92,340

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 8104.30, accessed March 30, 2023. These data may be overstated as HS subheading 8104.30 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
88 FR 6700, February 1, 2023	<i>Initiation of Five-Year (Sunset) Reviews</i>	https://www.govinfo.gov/content/pkg/FR-2023-02-01/pdf/2023-02083.pdf
88 FR 6784, February 1, 2023	<i>Pure Granular Magnesium From China; Institution of a Five-Year Review</i>	https://www.govinfo.gov/content/pkg/FR-2023-02-01/pdf/2023-02079.pdf

APPENDIX B
COMPANY-SPECIFIC DATA

* * * * *

APPENDIX C

SUMMARY DATA COMPILED IN PRIOR PROCEEDINGS

Table C-1

Pure magnesium ingot: Summary data concerning the U.S. market, 1998-2000

January to June 2000, and January to June 2001 C-3

Table C-2

Pure granular magnesium: Summary data concerning the U.S. market, 1998-2000,

January to June 2000, and January to June 2001 C-5

Table C-1

Pure magnesium ingot: Summary data concerning the U.S. market, 1998-2000, January-June 2000, and January-June 2001

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

Item	Calendar year			January-June		Period changes			
	1998	1999	2000	2000	2001	1998-2000	1998-99	1999-2000	Jan.-June 2000-Jan.-June 2001
U.S. consumption quantity: Amount	***	***	***	***	***	***	***	***	***
Producers' share ¹	***	***	***	***	***	***	***	***	***
Importers' share: ¹									
Israel	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***
Other sources	***	***	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***	***	***
U.S. consumption value: Amount	***	***	***	***	***	***	***	***	***
Producers' share ¹	***	***	***	***	***	***	***	***	***
Importers' share: ¹									
China	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***
Other sources	***	***	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***	***	***
U.S. imports from--									
Israel:									
Quantity	7,991	11,778	6,317	3,303	1,755	-21.0	47.4	-46.4	-46.9
Value	25,624	38,160	19,304	10,434	5,335	-24.7	48.9	-49.4	-48.9
Unit value	\$3,206.48	\$3,239.93	\$3,055.96	\$3,159.02	\$3,039.38	-4.7	1.0	-5.7	-3.8
Ending inventory	***	***	***	***	***	***	***	***	***
China:									
Quantity	2,194	0	244	186	83	-88.9	-100.0	(²)	-55.2
Value	5,469	0	345	264	97	-93.7	-100.0	(²)	-63.3
Unit value	2,493	(²)	\$1,413.45	\$1,421.09	\$1,165.36	-43.3	(²)	(²)	-18.0
Ending inventory	***	***	***	***	***	***	***	***	***
Other sources:									
Quantity	16,275	15,077	16,372	8,103	7,077	0.6	-7.4	8.6	-12.7
Value	49,402	43,678	42,896	22,035	17,402	-13.2	-11.6	-1.8	-21.0
Unit value	\$3,035.47	\$2,897.01	\$2,620.12	\$2,719.42	\$2,458.94	-13.7	-4.6	-9.6	-9.6
Ending inventory	***	***	***	***	***	***	***	***	***
All sources:									
Quantity	26,460	26,855	22,933	11,592	8,915	-13.3	1.5	-14.6	-23.1
Value	80,495	81,838	62,545	32,733	22,834	-22.3	1.7	-23.6	-30.2
Unit value	\$3,042.11	\$3,047.41	\$2,727.33	\$2,823.84	\$2,561.13	-10.3	0.2	-10.5	-9.3
Ending inventory	***	***	***	***	***	***	***	***	***

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

Item	Calendar year			January-June		Period changes			
	1998	1999	2000	2000	2001	1998-2000	1998-99	1999-2000	Jan.-June 2000-Jan.-June 2001
U.S. producers ¹ --									
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 (1,000 hours)	***	***	***	***	***	***	***	***	***
Wages paid (1,000 dollars)	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***
Productivity (tons per hour)	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***
Net sales:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
COGS	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income	***	***	***	***	***	***	***	***	***
Capital expenditures ³	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income	***	***	***	***	***	***	***	***	***
COGS/sales ¹	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales ¹	***	***	***	***	***	***	***	***	***

¹ Period changes are in percentage points.

² Not applicable.

³ Capital expenditures reported for primary producers and grinders.

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.

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

Table C-2

Pure granular magnesium: Summary data concerning the U.S. market, 1998-2000, January-June 2000, and January-June 2001

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

Item	Calendar year			January-June		Period changes			
	1998	1999	2000	2000	2001	1998-2000	1998-99	1999-2000	Jan.-June 2000-Jan.-June 2001
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share ¹	***	***	***	***	***	***	***	***	***
Importers' share: ¹									
China	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***
Subtotal	***	***	***	***	***	***	***	***	***
Other sources	***	***	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share ¹	***	***	***	***	***	***	***	***	***
Importers' share: ¹									
China	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***
Subtotal	***	***	***	***	***	***	***	***	***
Other sources	***	***	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***	***	***
U.S. imports from--									
China:									
Quantity	9,972	13,185	15,262	6,277	2,281	53.0	32.2	15.8	-63.7
Value	27,562	35,463	33,527	13,184	5,279	21.6	28.7	-5.5	-60.0
Unit value	\$2,763.80	\$2,689.61	\$2,196.78	\$2,100.41	\$2,314.51	-20.5	-2.7	-18.3	10.2
Ending inventory	***	***	***	***	***	***	***	***	***
Israel:									
Quantity	0	0	0	0	0	(²)	(²)	(²)	(²)
Value	0	0	0	0	0	(²)	(²)	(²)	(²)
Unit value	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Ending inventory	***	***	***	***	***	***	***	***	***
Subtotal:									
Quantity	9,972	13,185	15,262	6,277	2,281	53.0	32.2	15.8	-63.7
Value	27,562	35,463	33,527	13,184	5,279	21.6	28.7	-5.5	-60.0
Unit value	\$2,763.80	\$2,689.61	\$2,196.78	\$2,100.41	\$2,314.51	-20.5	-2.7	-18.3	10.2
Ending inventory	***	***	***	***	***	***	***	***	***
Other sources:									
Quantity	4,662	5,433	6,097	3,483	1,037	31.0	17.0	12.2	-70.2
Value	15,423	14,460	13,031	7,398	2,866	-16.0	-6.0	-9.9	-61.3
Unit value	\$3,308.47	\$2,661.49	\$2,137.34	\$2,124.05	\$2,763.84	-35.4	-19.6	-19.7	30.1
Ending inventory	***	***	***	***	***	***	***	***	***

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

Item	Calendar year			January-June		Period changes			
	1998	1999	2000	2000	2001	1998-2000	1998-99	1999-2000	Jan.-June 2000- Jan.-June 2001
All sources:									
Quantity	14,634	18,618	21,359	9,760	3,318	46.0	27.2	14.7	-66.0
Value	42,985	49,922	46,558	20,583	8,145	8.3	16.1	-6.7	-60.4
Unit value	\$2,937.31	\$2,681.41	\$2,179.81	\$2,108.84	\$2,454.96	-25.8	-8.7	-18.7	16.4
Ending inventory	***	***	***	***	***	***	***	***	***
U.S. producers ² --									
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 (1,000 hours)	***	***	***	***	***	***	***	***	***
Wages paid (1,000 dollars)	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***
Productivity (tons per hour)	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***
¹ Period changes are in percentage points.									
² Not applicable.									
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.									
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 domestic interested parties and it provided contact information for the following five firms as top purchasers of pure granular magnesium: ***. Purchaser questionnaires were sent to these five firms. *** responded that they had not purchased pure granular magnesium from any source at any time since January 1, 2018. No other firms submitted a response to the Commission's request for information.

