

## MICA (NATURAL)

(Data in metric tons unless otherwise noted)

**Domestic Production and Use:** Scrap and flake mica production, excluding low-quality sericite, was estimated to be 42,000 tons valued at \$4.2 million. Mica was mined in Georgia, North Carolina, and South Dakota. Scrap mica was recovered principally from mica and sericite schist and as a byproduct from the production of feldspar and kaolin and the beneficiation of industrial sand. Eight companies produced an estimated 67,000 tons of ground mica valued at about \$21 million from domestic and imported scrap and flake mica. Most of the domestic production was processed into small-particle-size mica by either wet or dry grinding. Primary uses were joint compound, oil-well-drilling additives, paint, roofing, and rubber products.

A minor amount of sheet mica has been produced as incidental production from feldspar mining in North Carolina in the past several years. Data on sheet mica production were not available in 2022. The domestic consuming industry was dependent on imports to meet demand for sheet mica. Most sheet mica was fabricated into parts for electrical and electronic equipment.

### **Salient Statistics—United States:**

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022<sup>e</sup></u>
Scrap and flake:					
Production: <sup>e, 1</sup>					
Sold and used	42,000	40,100	34,600	40,600	42,000
Ground	68,400	61,300	59,900	66,800	67,000
Imports <sup>2</sup>	28,100	27,300	20,400	24,100	21,000
Exports <sup>3</sup>	6,030	5,500	3,980	4,850	7,600
Consumption, apparent <sup>e, 4</sup>	64,100	61,900	50,000	59,900	55,000
Price, average, dollars per metric ton: <sup>e</sup>					
Scrap and flake	116	105	120	100	100
Ground:					
Dry	308	316	303	299	300
Wet	422	394	337	336	340
Net import reliance <sup>5</sup> as a percentage of apparent consumption	34	35	31	32	24
Sheet:					
Sold and used	W	W	W	NA	NA
Imports <sup>6</sup>	1,890	3,150	2,840	3,980	4,200
Exports <sup>7</sup>	686	779	528	633	950
Consumption, apparent <sup>e, 4</sup>	1,200	2,370	2,310	3,350	3,300
Price, average value, muscovite and phlogopite mica, dollars per kilogram: <sup>e</sup>					
Block	W	W	W	W	W
Splittings	1.65	1.66	1.57	1.88	1.80
Net import reliance <sup>5</sup> as a percentage of apparent consumption	100	100	100	100	100

**Recycling:** None.

**Import Sources (2018–21):** Scrap and flake: Canada, 39%; China, 38%; India, 8%; Finland, 4%; and other, 11%. Sheet: China, 72%; Brazil, 9%; Belgium, 4%; Austria, 3%, and other, 12%.

<u>Tariff:</u>	<u>Item</u>	<u>Number</u>	<u>Normal Trade Relations</u> <u>12–31–22</u>
	Split block mica	2525.10.0010	Free.
	Mica splittings	2525.10.0020	Free.
	Unworked, other	2525.10.0050	Free.
	Mica powder	2525.20.0000	Free.
	Mica waste	2525.30.0000	Free.
	Plates, sheets, and strips of agglomerated or reconstituted mica	6814.10.0000	2.7% ad valorem.
	Worked mica and articles of mica, other	6814.90.0000	2.6% ad valorem.

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**Depletion Allowance:** 22% (domestic), 14% (foreign).

**Government Stockpile:** None.

**Events, Trends, and Issues:** Domestic production of scrap and flake mica was estimated to have increased by 3% in 2022 compared with that in 2021. Apparent consumption of scrap and flake mica decreased by 8% owing to higher exports of mica powder in 2022. Apparent consumption of sheet mica was estimated to have been essentially unchanged from that in 2021. No environmental concerns are associated with the manufacture and use of mica products. Supplies of sheet mica for United States consumption were expected to continue to be from imports, primarily from China with some imports from Brazil.

**World Mine Production and Reserves:** World production of sheet mica has remained steady; however, reliable production data for some countries that were thought to be major contributors to the world total were unavailable.

	Scrap and flake			Sheet		
	Mine production <sup>e</sup>		Reserves <sup>8</sup>	Mine production <sup>e</sup>		Reserves <sup>8</sup>
	2021	2022		2021	2022	
United States	40,600	42,000	Large	W	NA	Very small
Canada	15,000	16,000	Large	NA	NA	NA
China	100,000	100,000	Large	NA	NA	NA
Finland	<sup>9</sup> 55,900	60,000	Large	NA	NA	NA
France	19,000	19,000	Large	NA	NA	NA
India	16,000	16,000	Large	1,000	1,000	110,000
Korea, Republic of	<sup>9</sup> 11,000	13,000	11,000,000	—	—	NA
Madagascar	70,000	65,000	Large	—	—	NA
Turkey	<sup>9</sup> 1,670	1,700	620,000	—	—	NA
Other countries	<u>55,000</u>	<u>54,000</u>	<u>Large</u>	<u>200</u>	<u>200</u>	<u>Moderate</u>
World total (rounded)	384,000	390,000	Large	NA	NA	NA

**World Resources:**<sup>8</sup> Resources of scrap and flake mica are available in clay deposits, granite, pegmatite, and schist, and are considered more than adequate to meet anticipated world demand in the foreseeable future. World resources of sheet mica have not been formally evaluated because of the sporadic occurrence of this material. Large deposits of mica-bearing rock are known to exist in countries such as Brazil, India, and Madagascar. Limited resources of sheet mica are available in the United States. Domestic resources were subeconomic because of the high cost of the hand labor required to mine and process sheet mica from pegmatites.

**Substitutes:** Some lightweight aggregates, such as diatomite, perlite, and vermiculite, may be substituted for ground mica when used as filler. Ground synthetic fluorophlogopite, a fluorine-rich mica, may replace natural ground mica for uses that require the thermal and electrical properties of mica. Many materials can be substituted for mica in numerous electrical, electronic, and insulation uses. Substitutes include acrylic, cellulose acetate, fiberglass, fishpaper, nylatron, nylon, phenolics, polycarbonate, polyester, styrene, polyvinyl chloride, and vulcanized fiber. Mica paper made from scrap mica can be substituted for sheet mica in electrical and insulation applications.

<sup>e</sup>Estimated. NA Not available. W Withheld to avoid disclosing company proprietary data. — Zero.

<sup>1</sup>Excludes low-quality sericite used primarily for brick manufacturing.

<sup>2</sup>Includes data for the following Harmonized Tariff Schedule of the United States codes: 2525.10.0050, <\$6.00 per kilogram; 2525.20.0000; and 2525.30.0000.

<sup>3</sup>Includes data for the following Schedule B codes: 2525.10.0000, <\$6.00 per kilogram; 2525.20.0000; and 2525.30.0000.

<sup>4</sup>Defined as sold or used by producing companies + imports – exports.

<sup>5</sup>Defined as imports – exports.

<sup>6</sup>Includes data for the following Harmonized Tariff Schedule of the United States codes: 2525.10.0010; 2525.10.0020; 2525.10.0050, >\$6.00 per kilogram; 6814.10.0000; and 6814.90.0000.

<sup>7</sup>Includes data for the following Schedule B codes: 2525.10.0000, >\$6.00 per kilogram; 6814.10.0000; and 6814.90.0000.

<sup>8</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>9</sup>Reported.