

## 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 35,000 tons valued at \$4.3 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 feldspar, industrial sand beneficiation, and kaolin. Eight companies produced an estimated 57,000 tons of ground mica valued at about \$22 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 2020. 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.

<b>Salient Statistics—United States:</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020<sup>e</sup></b>
Scrap and flake:					
Production: <sup>e, 1</sup>					
Sold and used	28,000	40,000	42,000	40,100	35,000
Ground	59,500	69,700	68,400	61,300	57,000
Imports <sup>2</sup>	31,500	29,700	28,100	26,700	20,000
Exports <sup>3</sup>	6,340	6,790	6,030	5,500	4,000
Consumption, apparent <sup>e, 4</sup>	53,200	62,900	64,100	61,300	51,000
Price, average, dollars per metric ton: <sup>e</sup>					
Scrap and flake	152	165	125	118	118
Ground:					
Dry	320	292	308	316	300
Wet	435	424	422	394	430
Employment, mine, number	NA	NA	NA	NA	NA
Net import reliance <sup>5</sup> as a percentage of apparent consumption	47	36	34	35	31
Sheet:					
Sold and used	W	W	W	W	W
Imports <sup>6</sup>	2,120	1,850	1,890	3,150	2,700
Exports <sup>7</sup>	689	704	686	793	550
Consumption, apparent <sup>e, 4</sup>	1,430	1,150	1,200	2,350	2,200
Price, average value, muscovite and phlogopite mica, dollars per kilogram: <sup>e</sup>					
Block	W	W	W	W	W
Splittings	1.61	1.66	1.65	1.66	1.66
Net import reliance <sup>5</sup> as a percentage of apparent consumption	100	100	100	100	100

**Recycling:** None.

**Import Sources (2016–19):** Scrap and flake: Canada, 44%; China, 32%; India, 9%; Finland, 4%; and other, 11%. Sheet: China, 56%; Brazil, 16%; Belgium, 6%; India, 4%; and other, 18%.

<b>Tariff:</b>	<b>Item</b>	<b>Number</b>	<b>Normal Trade Relations 12–31–20</b>
	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 val.
	Worked mica and articles of mica, other	6814.90.0000	2.6% ad val.

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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 decreased by 13% in 2020. Apparent consumption of scrap and flake mica decreased by 17%. Apparent consumption of sheet mica was estimated to have decreased by 6% in 2020. The economic effects of the COVID-19 pandemic had a significant impact on some of industries that use mica, primarily oil-well-drilling fluid and plastics for automobiles. 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 Belgium, Brazil, China, and India.

**World Mine Production and Reserves:** World production of sheet mica has remained steady; however, reliable production numbers for some countries that may influence that world total were unavailable. Reserves for the Republic of Korea were revised based on official Government data.

	Scrap and flake			Sheet		
	Mine production		Reserves <sup>8</sup>	Mine production		Reserves <sup>8</sup>
	2019	2020 <sup>e</sup>	2019	2019 <sup>e</sup>	2020 <sup>e</sup>	2019
United States	40,100	35,000	Large	W	NA	Very small
Canada	21,000	18,000	Large	NA	NA	NA
China	100,000	95,000	Large	NA	NA	NA
Finland	73,900	65,000	Large	NA	NA	NA
France	20,000	18,000	Large	NA	NA	NA
India	15,000	15,000	Large	1,000	1,000	110,000
Korea, Republic of	23,400	20,000	11,000,000	—	—	NA
Madagascar	50,000	30,000	Large	—	—	NA
Turkey	6,500	5,500	620,000	—	—	NA
Other countries	55,000	49,000	Large	200	200	Moderate
World total (rounded)	405,000	350,000	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 are not economical 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/kg; 2525.20.0000; and 2525.30.0000.

<sup>3</sup>Includes data for the following Schedule B codes: 2525.10.0000, <\$6.00/kg; 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/kg; 6814.10.0000; and 6814.90.0000.

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

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