

MICA (NATURAL), SHEET¹

(Data in metric tons, unless otherwise noted)

Domestic Production and Use: A minor amount of sheet mica, estimated at less than 500 kilograms, was produced in 2000, incidental to scrap and flake mica production and the mining of a gemstone-bearing pegmatite in Virginia. The domestic consuming industry was dependent upon imports and shipments of U.S. Government stockpile excesses to meet demand for sheet mica. During 2000, an estimated 4,300 tons of unworked mica split block and mica splittings valued at \$3.2 million was consumed by 14 companies in 7 States, mainly in the East and Midwest. Most was fabricated into parts for electronic and electrical equipment. An additional estimated 1,200 tons of imported worked mica valued at \$11.9 million was also consumed.

Salient Statistics—United States:	1996	1997	1998	1999	2000²
Production, mine ²	(²)	(²)	(²)	(²)	(²)
Imports, plates, sheets, and strips; worked mica; split block; splittings; other > \$1.00/kg	6,330	5,760	4,380	4,550	5,470
Exports, plates, sheets, and strips; worked mica; crude and rifted into sheet or splittings > \$1.00/kg	831	1,060	1,280	1,290	430
Shipments from Government stockpile excesses	1,110	326	557	708	1,500
Consumption, apparent	6,540	5,030	3,660	3,980	6,540
Price, average value, dollars per kilogram, muscovite and phlogopite mica, reported:					
Block	55	28	26	20	23
Splittings	1.75	1.69	1.67	1.67	1.70
Stocks, fabricator and trader, yearend	NA	NA	NA	NA	NA
Net import reliance ³ as a percent of apparent consumption	100	100	100	100	100

Recycling: None.

Import Sources (1996-99): India, 62%; Belgium, 13%; Germany, 10%; China, 5%; and other, 10%.

Tariff: Item	Number	Normal Trade Relations 12/31/00
Split block mica	2525.10.0010	Free.
Mica splittings	2525.10.0020	Free.
Unworked—other	2525.10.0050	Free.
Plates, sheets, and strips of agglomerated or reconstructed mica	6814.10.0000	2.7% ad val.
Worked mica and articles of mica—other	6814.90.0000	2.6% ad val.

Depletion Allowance: 22% (Domestic), 14% (Foreign).

Government Stockpile:

Material	Stockpile Status—9-30-00⁴			Disposal plan FY 2000	Disposals FY 2000
	Uncommitted inventory	Committed inventory	Authorized for disposal		
Block:					
Muscovite (stained and beffer)	51	207	51	(⁵)	250
Phlogopite	2	32	2	—	37
Film, muscovite	(²)	(²)	(²)	(⁵)	—
Splittings:					
Muscovite	4,168	1,028	4,168	(⁵)	1,065
Phlogopite	233	2	233	(⁵)	2

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Events, Trends, and Issues: Demand for sheet mica increased in 2000. Imports of splittings from India increased as demand for electrical equipment increased, especially transformers. Imports remained the principal source of sheet mica, and shipments from U.S. Government stockpile excesses continued to be a significant source of supply. The availability of good quality mica remained in short supply. There were no environmental problems associated with the manufacture of mica products.

World Mine Production, Reserves, and Reserve Base:

	Mine production ^e		Reserves ⁶	Reserve base ⁶
	1999	2000		
United States	(²)	(²)	Very small	Small
India	3,500	3,500	Very large	Very large
Russia	1,500	1,500	Moderate	Large
Other countries	<u>200</u>	<u>200</u>	<u>Moderate</u>	<u>Large</u>
World total	5,200	5,200	Large	Large

World Resources: There has been no formal evaluation of world resources of sheet mica 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. These domestic resources are uneconomic because of the high cost of hand labor required to mine and process the sheet mica.

Substitutes: Many materials can be substituted for mica in numerous electrical and electronic uses. Substitutes include acrylic, Benelex®, cellulose acetate, Delrin®, Duranel® N, fiberglass, fishpaper, Kapton®, Kel F®, Kydex®, Lexan®, Lucite®, Mylar®, nylon, nylatron, Nomex®, Noryl®, phenolics, Plexiglass®, polycarbonate, polyester, styrene, Teflon®, vinyl-PVC, and vulcanized fiber. Mica paper made from scrap mica can be substituted for sheet mica in electrical and insulation applications.

^eEstimated. NA Not available.

¹See also Mica (Natural), Scrap and Flake.

²Less than ½ unit.

³Defined as imports - exports + adjustments for Government and industry stock changes.

⁴See Appendix B for definitions.

⁵The total disposal plan for all categories of mica in the National Defense Stockpile, except phlogopite block, is undifferentiated at 1,025 metric tons (2,260,000 pounds).

⁶See Appendix C for definitions.