

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 1998, incidental to scrap and flake mica production and the mining of gemstone-bearing pegmatites. The domestic consuming industry was dependent on imports and shipments of U.S. Government stockpile excesses to meet demand for sheet mica. During 1998, an estimated 3,200 tons of unworked mica split block and mica splittings valued at \$1.9 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 1,800 tons of imported worked mica valued at \$13.3 million was also consumed.

Salient Statistics—United States:	1994	1995	1996	1997	1998^e
Production, mine ^o	(2)	(2)	(2)	(2)	(2)
Imports, plates, sheets, and strips; worked mica; split block; splittings; other > \$0.55/kg	2,610	4,230	6,330	5,760	5,000
Exports, plates, sheets, and strips; worked mica; crude and rifted into sheet or splittings > \$0.55/kg	1,003	935	831	1,060	1,340
Shipments from Government stockpile excesses	134	511	1,110	326	414
Consumption, apparent	1,740	3,800	6,540	5,030	4,070
Price, average value, dollars per kilogram, muscovite and phlogopite mica, reported:					
Block	66	73	77	41	30
Splittings	1.72	1.86	1.75	1.51	1.50
Stocks, fabricator and trader, yearend	^e 503	NA	NA	NA	NA
Net import reliance ³ as a percent of apparent consumption	100	100	100	100	100

Recycling: None.

Import Sources (1994-97): India, 63%; Belgium, 13%; Germany, 8%; China, 5%; and other, 11%.

Tariff:	Item	Number	Normal Trade Relations (NTR) 12/31/98	Non-NTR⁴ 12/31/98
	Split block mica	2525.10.0010	Free	Free.
	Mica splittings	2525.10.0020	Free	Free.
	Unworked—other	2525.10.0050	Free	Free.
	Plates, sheets, and strips of agglomerated or reconstructed mica	6814.10.0000	3.2% ad val.	40% ad val.
	Worked mica and articles of mica—other	6814.90.0000	3.1% ad val.	45% ad val.

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

Government Stockpile:

Stockpile Status—9-30-98⁵

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposal plan FY 1998	Disposals FY 1998
Block:					
Muscovite	735	289	598	(6)	453
Phlogopite	59	—	—	—	—
Film, muscovite	9	(2)	9	(6)	9
Splittings:					
Muscovite	5,550	—	5,550	(6)	93
Phlogopite	264	—	264	(6)	1

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Events, Trends, and Issues: Demand for sheet mica decreased. Imports of splittings from India decreased as demand for electrical equipment declined, 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		Reserves ⁷	Reserve base ⁷
	1997	1998 ^e		
United States	(²)	(²)	Very small	Small
India	2,100	2,000	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	3,800	3,700	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.

⁵See Appendix C for definitions.

⁶The 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).

⁷See Appendix D for definitions.