

**MICA (NATURAL), SHEET<sup>1</sup>**

(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 1996. The domestic consuming industry was dependent on imports and shipments of Government stockpile excesses to meet demand for sheet mica. During 1996, an estimated 5,100 tons of unworked mica split block and mica splittings valued at \$1.3 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 1,100 tons of imported worked mica valued at \$7.2 million was also consumed.

<b>Salient Statistics—United States:</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996<sup>e</sup></b>
Production, mine <sup>e</sup>	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Imports, plates, sheets, and strips; worked mica; split block; splittings; other > \$0.55/kg	3,460	4,310	2,610	4,230	6,190
Exports, plates, sheets, and strips; worked mica; crude and rifted into sheet or splittings > \$0.55/kg	606	909	1,003	935	900
Shipments from Government stockpile excesses	264	165	134	511	1,400
Consumption, apparent	2,250	2,180	1,740	3,800	6,690
Price, average value, dollars per kilogram, muscovite mica, reported:					
Block	80	95	66	73	75
Splittings	1.53	1.55	1.59	1.70	1.75
Stocks, fabricator and trader, yearend <sup>e</sup>	NA	502	503	NA	NA
Net import reliance <sup>3</sup> as a percent of apparent consumption	100	100	100	100	100

**Recycling:** None.

**Import Sources (1992-95):** India, 62%; Belgium, 17%; Brazil, 6%; China, 4%; and other, 11%.

<b>Tariff:</b>	<b>Item</b>	<b>Number</b>	<b>Most favored nation (MFN) 12/31/96</b>	<b>Non-MFN<sup>4</sup> 12/31/96</b>
	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	4.3% ad val.	40% ad val.
	Worked mica and articles of mica - other	6814.90.0000	4.1% ad val.	45% ad val.

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

**Government Stockpile:****Stockpile Status—9-30-96**

<b>Material</b>	<b>Uncommitted inventory</b>	<b>Committed inventory</b>	<b>Authorized for disposal</b>	<b>Disposals Jan.-Sept. 96</b>
Block:				
Muscovite	1,387	2	1,310	459
Phlogopite	8	—	—	—
Film, muscovite	115	34	96	276
Splittings:				
Muscovite	6,002	33	6,002	234
Phlogopite	307	50	307	226

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**Events, Trends, and Issues:** Demand for sheet mica increased as imports of splittings from India increased to meet demand for electrical equipment, especially transformers. Imports remained the principal source of sheet mica, and shipments from Government stockpile excesses increased to become 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 <sup>5</sup>	Reserve base <sup>5</sup>
	1995	1996 <sup>e</sup>		
United States	( <sup>2</sup> )	( <sup>2</sup> )	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 many 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 uses.

<sup>e</sup>Estimated. NA Not available.

<sup>1</sup>See also Mica (Natural), Scrap and Flake.

<sup>2</sup>Less than ½ unit.

<sup>3</sup>Defined as imports - exports + adjustments for Government and industry stock changes.

<sup>4</sup>See Appendix B.

<sup>5</sup>See Appendix C for definitions.