BARITE

(Data in thousand metric tons, unless otherwise noted)

Domestic Production and Use: Barite sales by domestic producers totaled about 480,000 tons in 2003, an increase of about 14% from 2002, and the value was about $14 million. Sales were from mines in two States; most sales came from Nevada operations followed by a significantly smaller sales volume from Georgia. In 2002, an estimated 2 million tons of ground barite was sold by crushers and grinders from seven States from domestic production and imports. Nearly 95% of the barite sold in the United States was used as a weighting agent in gas- and oil-well-drilling fluids. Shipments went mostly to the gas-drilling industry in the Gulf of Mexico (GOM) and onshore in Louisiana and Texas, which had slightly less than 70% of total gas production in the conterminous United States. The GOM rig count fell to about 110 rigs in October 2002 and stayed near that level through August 2003, while the onshore rig count expanded strongly through 2003. Smaller amounts of barite were used for exploration and development drilling in the western United States, which accounted for about 20% of gas production in the conterminous United States, and in western Canada and Alaska. Examples of industrial end uses include adding weight to rubber mudflaps on trucks and to the cement jacket around petroleum pipelines under water. Because barite significantly reduces X-rays and gamma rays, it is the gastrointestinal X-ray contrast medium; it is used in cement vessels that contain radioactive materials, and the faceplate and funnelglass of cathode-ray tubes used for television sets and computer monitors to protect the user from radiation. In the metal casting industry, barite forms part of the mold-release compounds. Barite also has become part of automotive and truck brake pads and clutch pads. Barite is also used in automobile paint primer for metal protection and gloss, and as the raw material for barium chemicals, such as barium carbonate. Barium carbonate goes into “leaded” glass and ceramic frits.

Salient Statistics—United States:	**1999**	**2000**	**2001**	**2002**	**2003[e]**
Sold or used, mine	434	392	400	420	480
Imports for consumption:					
Crude barite	836	2,070	2,470	1,510	2,000
Ground barite	17	16	6	5	20
Other	18	15	35	31	15
Exports	22	36	45	47	50
Consumption, apparent[1] (crude barite)	1,280	2,460	2,870	1,920	2,470
Consumption[2] (ground and crushed)	1,370	2,100	2,670	1,980	2,120
Price, average value, dollars per ton, mine	25.60	25.10	25.00	28.80	28.90
Employment, mine and mill, number[e]	300	330	340	320	340
Net import reliance[3] as a percentage of apparent consumption	66	84	86	78	81

Recycling: None.

Import Sources (1999-2002): China, 87%; India, 9%; Morocco, 1%; and other, 3%.

Tariff: Item	Number	Normal Trade Relations 12/31/03
Crude barite	2511.10.5000	$1.25/t.
Ground barite	2511.10.1000	Free.
Oxide, hydroxide, and peroxide	2816.30.0000	2% ad val.
Other chlorides	2827.38.0000	4.2% ad val.
Other sulfates	2833.27.0000	0.6% ad val.
Other nitrates	2834.29.5000	3.5% ad val.
Carbonate	2836.60.0000	2.3% ad val.

Depletion Allowance: 14% (Domestic and foreign).

Government Stockpile: None.

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Events, Trends, and Issues: In 2003 U.S. barite consumption was about 2.46 million tons, up from about 1.62 million tons in 2002. Barite imports for consumption increased by an estimated 30% compared with 2002 levels. Major foreign sources of barite have high-grade deposits, relatively low labor costs, and relatively inexpensive transportation costs to U.S. Gulf Coast grinding plants. The Nevada producers were competitive in the California market, the Great Plains, and the Canadian markets, and will probably continue mining for more than 10 years.

On the demand side, onshore barite consumption increased as the U.S. onshore drill rig count rose about 32% to 965 in August. Two major domestic barite suppliers reported flat offshore GOM sales. In August 2003 the sum of North American and Latin American drill rigs was 1,744, about 35% more than August 2002. Drill rig activity for Africa in August 2003 was less than August 2002, while the count for the combined Asian Pacific, Europe, and Middle East areas had a nearly 5% increase.

Historically, in the United States, petroleum-well drilling has been a driving force in the demand for barite, but oil-well drilling has become much less important to that demand since early 1998. In 2003, oil-directed drill rig counts declined to about 14% of active U.S. drill rigs in contrast to about 40% of the count in early 1998. It is not clear that the U.S. barite demand will be strongly affected by the decline in oil-directed drill rigs.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves[5]	Reserve base[5]
	2002	2003[e]		
United States	420	480	26,000	60,000
Algeria	45	50	9,000	15,000
Brazil	55	55	2,100	5,000
China	3,100	3,500	62,000	360,000
France	75	75	2,000	2,500
Germany	120	125	1,000	1,500
India	600	900	53,000	80,000
Iran	220	250	NA	NA
Korea, North	70	70	NA	NA
Mexico	150	180	7,000	8,500
Morocco	470	470	10,000	11,000
Russia	60	60	2,000	3,000
Thailand	24	30	9,000	15,000
Turkey	120	100	4,000	20,000
United Kingdom	60	60	100	600
Other countries	420	290	12,000	160,000
World total (rounded)	6,000	6,700	200,000	740,000

World Resources: In the United States, identified resources of barite are estimated to be 150 million tons, and hypothetical resources include an additional 150 million tons. The world's barite resources[5] in all categories are about 2 billion tons, but only about 740 million tons are identified.

Substitutes: In the drilling mud market, alternatives to barite include celestite, ilmenite, iron ore, and synthetic hematite that is manufactured in Germany. None of these substitutes, however, has had a major impact on the barite drilling mud industry.

[e]Estimated. NA Not available.
[1]Sold or used by domestic mines – exports + imports.
[2]Domestic and imported crude barite sold or used by domestic grinding establishments.
[3]Defined as imports – exports + adjustments for Government and industry stock changes.
[5]See Appendix C for definitions.