

BARITE

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: Barite sales by domestic producers totaled about 550,000 tons in 2004 valued at about \$17 million, an increase in production of about 18% from 2003. Mines were located in two States. Most sales came from Nevada operations followed by a significantly smaller sales volume from Georgia operations. In 2004, an estimated 2.6 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 from Nevada crushers and grinders went mostly to the Colorado and Wyoming gas-drilling industry. This region produced about 13% of total U.S. natural gas in June 2004. The region's drill rig count had risen from 71 rigs in April 2003 to 146 rigs in September 2004. The imports to the Louisiana and Texas ports (Gulf of Mexico [GOM]) went primarily to the Texas, Louisiana, New Mexico, and Oklahoma region. This region produced about 50% of total U.S. natural gas in June 2004. The region's drill rig count rose from 572 rigs to January 2003 to 856 rigs in September 2004. The Federal offshore GOM drill rig count¹ fell from 95 rigs in June 2003 to about 71 rigs in September 2004; these gas wells produced about 19% of total U.S. natural gas production in June 2004.

Examples of barite 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 an ingredient in the faceplate and funnelglass of television and computer monitor tubes to reduce radiation emissions. In the metal casting industry, barite is part of the mold-release compounds. Barite is a component of brake and clutch pads for automobiles and trucks and also is used in automobile paint primer for metal protection and gloss. It is the raw material for barium chemicals, such as barium carbonate, which is in leaded glass and ceramic frits.

Salient Statistics—United States:	2000	2001	2002	2003	2004^e
Sold or used, mine	392	400	420	468	550
Imports for consumption:					
Crude barite	2,070	2,470	1,510	1,620	2,100
Ground barite	16	6	5	(²)	(²)
Other	15	35	31	33	26
Exports	36	45	47	44	78
Consumption, apparent ³ (crude barite)	2,460	2,870	1,920	2,070	2,600
Consumption ⁴ (ground and crushed)	2,100	2,670	1,980	2,230	2,500
Price, average value, dollars per ton, f.o.b. mine	25.10	25.00	28.80	28.90	30.00
Employment, mine and mill, number ^e	330	340	320	340	340
Net import reliance ⁵ as a percentage of apparent consumption	84	86	78	77	79

Recycling: None.

Import Sources (2000-03): China, 90%; India, 8%; and other, 2%.

Tariff: Item	Number	Normal Trade Relations 12-31-04
Crude barite	2511.10.5000	\$1.25/t.
Ground barite	2511.10.1000	Free.
Oxide, hydroxide, and peroxide	2816.40.2000	2% ad val.
Other chlorides	2827.39.4500	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.

Events, Trends, and Issues: Barite imports for consumption increased by an estimated 28% to 2.1 million tons compared with 2003 levels. Major foreign sources of barite have high-grade deposits, relatively low labor costs, and relatively inexpensive transportation costs within their country but purchasers have had to pay increased costs for shipping to the U.S. Gulf Coast grinding plants. The Nevada producers were competitive in the California market, the Great Plains, and the Canadian markets, and probably sold some product in the Gulf Coast owing to rising ocean transportation costs.

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On the demand side, United States onshore barite consumption increased as the U.S. onshore drill rig count rose from 1,022 in January to 1,155 in September. Offshore drill rig count started at 105 in January, declining to below 100 drill rigs for an average level of 95 rigs from March through October. Damage caused by hurricane Ivan on September 16 disrupted production and transportation of crude petroleum by underwater pipeline to refineries for an extended period of time. Employees were removed from production and drilling platforms for safety reasons. Sea floor mudslides have disrupted oil and gas pipelines. Three major domestic barite suppliers reported flat or slightly declining offshore GOM sales. The onshore drill rig count increases led to increased barite demand. The increases in onshore drill rigs came mostly from the independent exploration and development companies. The total U.S. September 2004 drill rig count rose 15% to about 1,250 rigs compared with about 1,090 in September 2003. In the United States, petroleum-well (both oil- and gas-directed) drilling has been a driving force in the demand for barite, but oil-well drilling has become much less important since early 1998. In 2004, gas-directed drill rig counts remained close to the 86% level of active U.S. drill rigs.

In September 2004, the sum of North American and Latin American oil- and gas-directed drill rigs was about 1,810, about 6% greater than September 2003. The count for the Middle East rose to about 245 rigs, a 14% rise compared with September 2003. The September 2004 drill rig count in the Commonwealth of Independent States rose by 30% to about 212 rigs compared with September 2003, and the September 2004 drill rig count in Asia Pacific rose by about 17% to about 210 rigs compared with September 2003. The drill rig activity for Africa in September 2004 was essentially unchanged compared with September 2003, and the European drill rig count declined 28% to about 63 rigs compared with September 2003.

World Mine Production, Reserves, and Reserve Base:

	Mine production		Reserves ⁶	Reserve base ⁶
	2003	2004 ^e		
United States	468	550	25,000	55,000
Algeria	50	55	9,000	15,000
Brazil	55	60	2,100	5,000
China	3,500	3,800	62,000	360,000
France	75	75	2,000	2,500
Germany	120	120	1,000	1,500
India	700	800	53,000	80,000
Iran	150	170	NA	NA
Korea, North	70	70	NA	NA
Mexico	256	270	7,000	8,500
Morocco	356	340	10,000	11,000
Russia	60	60	2,000	3,000
Thailand	130	140	9,000	15,000
Turkey	110	120	4,000	20,000
United Kingdom	60	60	100	600
Other countries	540	210	12,000	160,000
World total (rounded)	6,700	6,900	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 resources⁶ 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.

^eEstimated. NA Not available.

¹Gulf of Mexico is "Federal offshore" minus "CA offshore" minus "LA inland water" minus "TX inland water."

²Less than ½ unit.

³Sold or used by domestic mines – exports + imports.

⁴Domestic and imported crude barite sold or used by domestic grinding establishments.

⁵Defined as imports – exports + adjustments for Government and industry stock changes.

⁶See [Appendix C](#) for definitions.