(Fused aluminum oxide and silicon carbide) (Data in metric tons unless otherwise noted)

Domestic Production and Use: Fused aluminum oxide was produced by two companies at three plants in the United States and Canada. Production of regular-grade fused aluminum oxide had an estimated value of \$1.92 million, and production of high-purity fused aluminum oxide was estimated to have a value of more than \$4.79 million. Silicon carbide was produced by two companies at two plants in the United States. Domestic production of crude silicon carbide had an estimated value of about \$26.4 million. Bonded and coated abrasive products accounted for most abrasive uses of fused aluminum oxide and silicon carbide.

<u>Salient Statistics—United States</u> : Production, ¹ United States and Canada (crude):	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009^e</u>
Fused aluminum oxide, regular	10,000	10,000	10,000	10,000	10,000
Fused aluminum oxide, high-purity	5,000	5,000	5,000	5,000	5,000
Silicon carbide Imports for consumption (U.S.):	35,000	35,000	35,000	35,000	35,000
Fused aluminum oxide	244,000	209,000	237,000	285,000	49,200
Silicon carbide Exports (U.S.):	201,000	186,000	164,000	127,000	55,900
Fused aluminum oxide	13,900	15,300	18,200	21,900	11,900
Silicon carbide	15,600	20,300	19,300	17,000	18,300
Consumption, apparent (U.S.): Fused aluminum oxide	NA	NA	NA	NA	NA
Silicon carbide	220,000	201,000	180,000	145,000	72,700
Price, value of imports, dollars per ton (U.S.): Fused aluminum oxide, regular	314	310	361	512	660
Fused aluminum oxide, high-purity	1,010	1,170	1,110	1,230	1,170
Silicon carbide	487	477	550	835	654
Net import reliance ² as a percentage of apparent consumption (U.S.):					
Fused aluminum oxide	NA	NA	NA	NA	NA
Silicon carbide	84	83	81	76	52

Recycling: Up to 30% of fused aluminum oxide may be recycled, and about 5% of silicon carbide is recycled.

Import Sources (2005-08): Fused aluminum oxide, crude: China, 83%; Canada, 10%; Venezuela, 4%; Brazil, 1%; and other, 2%. Fused aluminum oxide, grain: Brazil, 27%; Germany, 25%; Austria, 16%; Italy, 8%; and other, 24%. Silicon carbide, crude: China, 83%; Venezuela, 6%; Romania, 4%; Netherlands, 3%; and other, 4%. Silicon carbide, grain: China, 39%; Brazil, 23%; Vietnam, 8%; Russia, 8%; and other, 22%.

<u>Tariff</u> : Item	Number	Normal Trade Relations 12-31-09
Fused aluminum oxide, crude	2818.10.1000	Free.
Fused aluminum oxide, grain	2818.10.2000	1.3% ad val.
Silicon carbide, crude	2849.20.1000	Free.
Silicon carbide, grain	2849.20.2000	0.5% ad val.

Depletion Allowance: None.

<u>Government Stockpile</u>: National Defense Stockpile sales held during fiscal year 2007 depleted all remaining inventory of fused aluminum oxide abrasive grain.

ABRASIVES (MANUFACTURED)

Events, Trends, and Issues: Imports and higher operating costs continued to challenge abrasives producers in the United States and Canada. Foreign competition, particularly from China, is expected to persist and further curtail production in North America. Due to the negative impact of the economic recession on U.S. manufacturing sectors that utilize manufactured abrasives, there were large drops in the imports of aluminum oxide and silicon carbide. Global prices of abrasive aluminum oxide continued moving steadily higher in a price trend that began in 2007. Global prices of silicon carbide have also increased steadily since 2007, but they leveled out during the last half of 2009.

World Production Capacity:

world Production Capacity:				
	Fused alu	ıminum oxide	Silicon carbide	
	2008	2009 ^e	2008	2009 ^e
United States and Canada	60,400	60,400	42,600	42,600
Argentina	—	—	5,000	5,000
Australia	50,000	50,000	—	
Austria	60,000	60,000	—	_
Brazil	50,000	50,000	43,000	43,000
China	700,000	700,000	455,000	455,000
France	40,000	40,000	16,000	16,000
Germany	80,000	80,000	36,000	36,000
India	40,000	40,000	5,000	5,000
Japan	25,000	25,000	60,000	60,000
Mexico	_		45,000	45,000
Norway	—	—	80,000	80,000
Venezuela	_		30,000	30,000
Other countries	80,000	80,000	<u>190,000</u>	190,000
World total (rounded)	1,190,000	1,190,000	1,010,000	1,010,000

<u>World Resources</u>: Although domestic resources of raw materials for the production of fused aluminum oxide are rather limited, adequate resources are available in the Western Hemisphere. Domestic resources are more than adequate for the production of silicon carbide.

<u>Substitutes</u>: Natural and manufactured abrasives, such as garnet, emery, or metallic abrasives, can be substituted for fused aluminum oxide and silicon carbide in various applications.

^eEstimated. NA Not available. — Zero.

¹Rounded to the nearest 5,000 tons to protect proprietary data.

²Defined as imports – exports + adjustments for Government and industry stock changes.