MANUFACTURED ABRASIVES

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

Domestic Production and Use: Fused aluminum oxide was produced by four companies in seven plants in the United States and Canada. The production of regular-grade fused aluminum oxide represented utilization of 70% of the rated industry capacity and was valued at about $55 million. Production of high-purity fused aluminum oxide utilized about 89% of rated industry capacity and was valued at about $14 million. Silicon carbide was produced by three companies in four plants in the United States and Canada. U.S. and Canadian production of crude silicon carbide utilized about 81% of rated industry capacity and was valued at about $42 million.

Salient Statistics—United States:	1991	1992	1993	1994	1995[e]
Production, United States and Canada (crude):					
Fused aluminum oxide, regular	138,000	143,000	132,000	133,000	129,000
Fused aluminum oxide, high-purity	24,500	24,200	21,300	29,200	24,100
Silicon carbide	78,900	84,300	74,900	84,700	W
Imports for consumption[e]					
Fused aluminum oxide	140,000	136,000	158,000	145,000	141,000
Silicon carbide	70,000	89,000	115,000	110,000	136,000
Exports					
Fused aluminum oxide	11,000	12,000	11,000	13,000	10,000
Silicon carbide	10,000	14,000	17,000	16,000	16,200
Consumption: Apparent					
Fused aluminum oxide	NA	NA	NA	NA	NA
Silicon carbide	NA	NA	NA	NA	NA
Price, range of value, dollars per ton					
Fused aluminum oxide, regular	381	395	362	361	353
Fused aluminum oxide, high-purity	619	594	621	557	470
Silicon carbide	500	516	540	531	W
Stocks, producer	NA	NA	NA	NA	NA
Employment, mine and mill	NA	NA	NA	NA	NA
Net import reliance[1] as a percent of apparent consumption	NA	NA	NA	NA	NA

Recycling: The U.S. Bureau of Mines estimates that about 39,000 tons of fused aluminum oxide is recycled and that silicon carbide recycling is about 5,000 tons.

Import Sources (1991-94): Fused aluminum oxide crude: Canada, 90%; and other, 10%. Fused aluminum oxide grain: Austria, 34%; Canada, 31%; Germany, 6%; Brazil, 5%; and other, 24%. Silicon carbide crude: Canada, 61%; China; 34%, and other, 5%. Silicon carbide grain: Norway, 44%; Germany, 15%; Brazil, 11%; Canada, 7%; and other, 23%.

Tariff: Item	Number	Most favored nation (MFN) 12/31/95	Non-MFN[2] 12/31/95
Fused aluminum oxide, crude	2818.10.1000	Free	Free.
Fused aluminum oxide, grain	2818.10.2000	0.7¢/kg	2.2¢/kg.
Silicon carbide, crude	2849.20.1000	Free	Free.
Silicon carbide, grain	2849.20.2000	0.7¢/kg	2.2¢/kg.

Depletion Allowance: None.

Government Stockpile:

	Stockpile Status—9-30-95			
Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposals Jan.-Sept. 95
Fused aluminum oxide, crude	196,000	—	196,000	—
Fused aluminum oxide, grain	33,200	2,010	33,200	2,490
Silicon carbide, crude	25,100	2,880	25,100	4,080

Prepared by **Manufactured Abrasives Specialist, (703) 648-7721.**

MANUFACTURED ABRASIVES

Events, Trends, and Issues: The fused aluminum oxide industry appears to have stopped its decline and has stabilized at current production levels. One silicon carbide plant stopped production during 1995. Large volumes of low cost silicon carbide from China, appears to have affected U.S. and Canadian production.

World Production Capacity:

	Fused aluminum oxide capacity		Silicon carbide capacity	
	1994	1995[e]	1994	1995[e]
United States and Canada	245,000	245,000	103,000	83,000
Argentina	—	—	6,000	6,000
Australia	100,000	100,000	—	—
Austria	60,000	60,000	—	—
Brazil	96,000	96,000	43,000	43,000
China	300,000	300,000	250,000	250,000
France	45,000	45,000	16,000	16,000
Germany	86,000	86,000	36,000	36,000
India	20,000	20,000	13,000	13,000
Japan	55,000	55,000	90,000	90,000
Mexico	—	—	25,000	25,000
Norway	—	—	80,000	80,000
Venezuela	—	—	20,000	20,000
Other countries	450,000	450,000	250,000	250,000
World total (rounded)	1,500,000	1,500,000	930,000	910,000

World Resources: Domestic resources of raw materials for production of fused aluminum oxide may be limited, but adequate resources are available in the Western Hemisphere. Domestic resources are more than adequate for the production of silicon carbide.

Substitutes: Industrial diamond, cubic boron nitride, and other natural and manufactured abrasives can be used in most applications.

[e]Estimated. NA Not available. W Withheld to avoid disclosing company proprietary data.

[1]Defined as imports - exports + adjustments for Government and industry stock changes.

[2]See Appendix B.