DIAMOND (INDUSTRIAL)

(Data in million carats, unless noted)

Domestic Production and Use: Synthetic diamond production maintained its record-high level. Most industrial diamond produced domestically was synthetic grit and powder. The output was from two firms, one each in New Jersey and Ohio. Seven firms recovered and sold industrial diamond as the principal product. About 35 firms recovered industrial diamond in secondary operations. Major uses of all industrial diamond were machinery, 27%; mineral services, 18%; stone and ceramic products, 17%; abrasives, 16%; contract construction, 13%; transportation equipment, 6%; and other, 3%. The mineral services industry, primarily drilling, accounted for 59% of stone consumption.

Salient Statistics—United States:[1]	1991	1992	1993	1994	1995[e]
Bort, grit, and powder and dust, natural and synthetic:					
Production: Manufactured diamond	90.0	95.0	105	104	115
Secondary	3.5	3.4	15.9	16.0	26.1
Imports for consumption	70.0	97.3	133	174	200
Exports and reexports	78.8	83.6	107	153	120
In manufactured products[e]	.6	.6	.6	.4	.8
Sales from Government stockpile excesses	5.0	10.4	—	2.0	.2
Consumption, apparent	89.1	122	146	141	222
Price, value of imports, dollars per carat	.83	.70	.61	.51	.46
Net import reliance[2] as a percent of apparent consumption	E	19	18	15	36
Stones, natural:					
Production: Mine	—	—	—	—	—
Secondary	.3	.1	.1	.1	.3
Imports for consumption	7.6	9.8	5.2	2.8	3.9
Exports and reexports[3]	2.9	5.6	3.4	4.4	5.6
Sales from Government stockpile excesses	—	—	1.3	3.1	.3
Consumption, apparent	5.0	4.3	1.9	1.5	—
Price, value of imports, dollars per carat	6.68	4.56	6.85	9.41	6.66
Net import reliance[2] as a percent of apparent consumption	94	98	95	95	E

Recycling: About 26.4 million carats were salvaged in secondary production from salvage stone, sludge, and swarf.

Import Sources (1991-94): Bort, grit, and powder and dust, natural and synthetic: Ireland, 63%; China, 7%; Russia, 7%; and other, 23%. Stone, natural: United Kingdom, 30%; Zaire, 23%; Ireland, 16%; and other, 31%.

Tariff: Item	Number	Most favored nation (MFN) 12/31/95	Non-MFN[4] 12/31/95
Miners' diamond, carbonados	7102.21.1010	Free	Free.
Other	7102.21.1020	Free	Free.
Industrial diamond, natural advanced	7102.21.3000	3.9% ad val.	30% ad val.
Industrial diamond, natural not advanced	7102.21.4000	Free	Free.
Industrial diamond, other	7102.29.0000	Free	Free.
Dust, grit, or powder	7105.10.0000	Free	Free.

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

Government Stockpile: Excess crushing bort and industrial stones were sold at auction.

Stockpile Status—9-30-95

Material	Uncommitted inventory	Committed inventory	Authorized for disposal	Disposals Jan.-Sept. 95
Crushing bort	2.0	—	1.7	0.22
Industrial stones	5.1	0.09	2.1	0.26

Events, Trends, and Issues: The industrial diamond industry experienced another robust year, and U.S. consumption is estimated to have increased significantly. Total U.S. sales, including exports, were up. It is estimated that the industrial diamond worldwide market performed similarly to the U.S. market. Companies in Ireland, South Africa, Sweden, Germany, South Korea, and the United States increased production capacity for synthetic industrial diamond during 1995.

World Mine Production, Reserves, and Reserve Base:[5]

	Mine production		Reserves[e 6]	Reserve base[e 6]
	1994	1995[e]		
United States	—	—	—	Unknown
Australia	23.8	23.0	500	900
Botswana	5.0	5.0	130	200
Brazil	.9	.9	5	15
China	.9	.8	10	20
Russia	8.5	8.0	40	65
South Africa	5.8	6.0	70	150
Zaire	13.0	5.0	150	350
Other countries	.8	1.3	80	200
World total (may be rounded)	58.7	50.0	980	1,900

World Resources: The potential to discover diamond resources in the United States, Canada, and Russia has improved. However, evaluation of deposits already discovered will take several more years. Technology has been developed to synthesize diamond for industrial use worldwide in the range of sizes of powder, dust, and grit; and firms in the United States and Japan manufacture synthetic stones. World resources of natural industrial diamond in the stone-size range are unknown.

Substitutes: Competitive materials are cubic boron nitride, fused aluminum oxide, and silicon carbide as manufactured abrasive materials and garnet, emery, and corundum as natural abrasive minerals. Synthesized polycrystalline diamond was competitive with natural stones in many applications. Research continued on additional uses of synthetic polycrystalline compacts and shapes as substitutes for stones and the uses of diamond films and diamond-like carbon coatings.

[e]Estimated. E Net exporter.

[1]Industry stocks and employment were unknown.

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

[3]Includes diamonds in manufactured abrasive products.

[4]See Appendix B.

[5]Natural industrial diamond only.

[6]See Appendix C for definitions.