

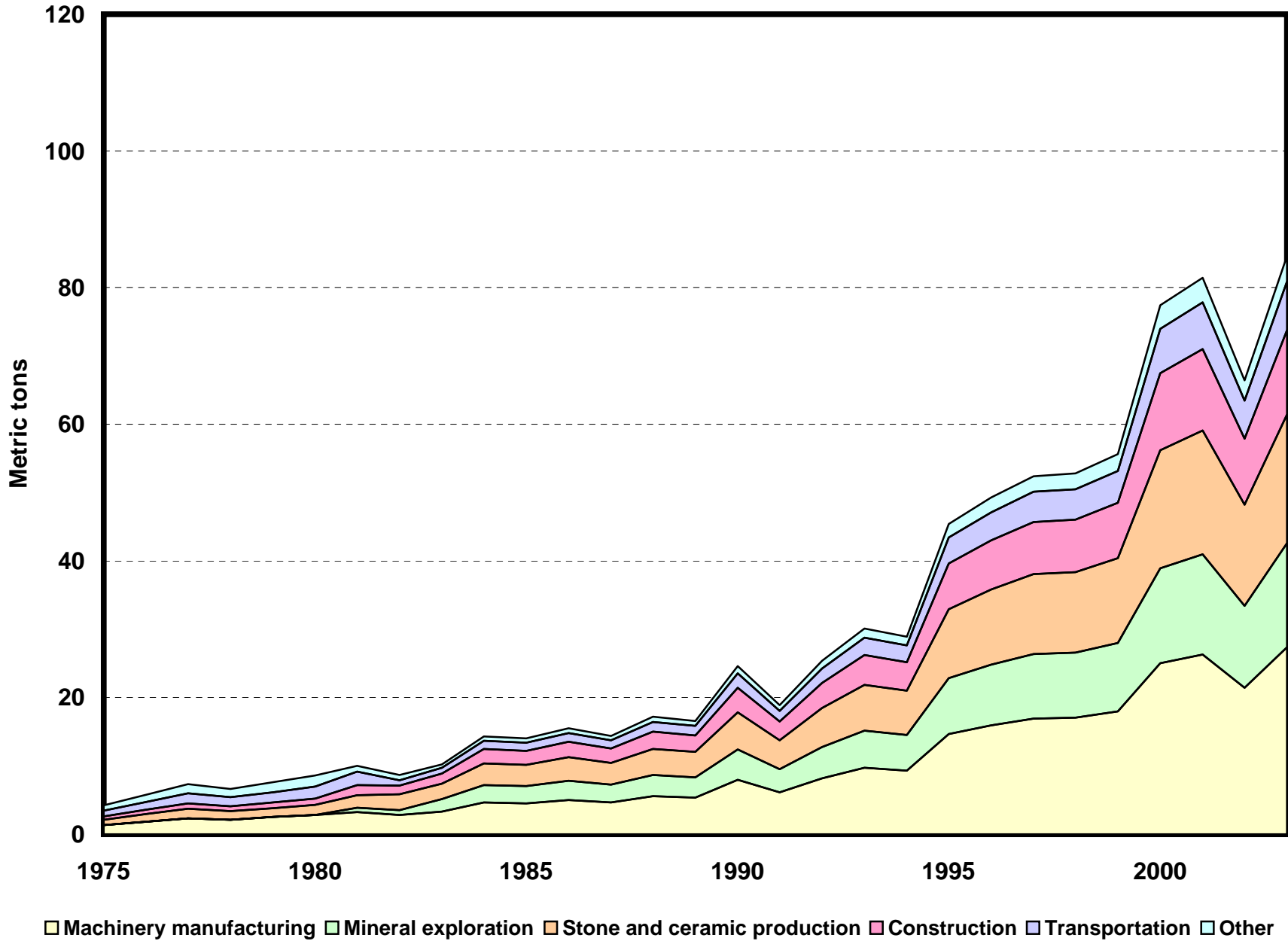
INDUSTRIAL DIAMOND END-USE STATISTICS¹
U.S. GEOLOGICAL SURVEY
 [Metric tons]

Last modification: September 15, 2005

Year	Machinery manufacturing	Mineral exploration	Stone and ceramic production	Construction	Transportation	Other	Apparent consumption
1975	1.34		0.80	0.46	0.84	0.76	4.20
1976	1.86		1.10	0.64	1.16	1.04	5.80
1977	2.34		1.39	0.80	1.46	1.31	7.30
1978	2.11		1.25	0.73	1.32	1.19	6.60
1979	2.51		1.29	0.84	1.52	1.44	7.60
1980	2.84		1.46	0.95	1.72	1.63	8.60
1981	3.26	0.60	1.86	1.47	1.96	0.85	10.0
1982	2.81	0.70	2.38	1.27	0.73	0.82	8.70
1983	3.29	1.84	2.27	1.49	0.86	0.45	10.2
1984	4.62	2.57	3.19	2.09	1.20	0.63	14.3
1985	4.52	2.52	3.12	2.04	1.18	0.62	14.0
1986	5.01	2.79	3.46	2.26	1.30	0.68	15.5
1987	4.65	2.59	3.21	2.10	1.21	0.63	14.4
1988	5.56	3.10	3.84	2.51	1.44	0.76	17.2
1989	5.36	2.99	3.70	2.42	1.39	0.73	16.6
1990	7.95	4.43	5.49	3.59	2.07	1.08	24.6
1991	6.10	3.40	4.21	2.76	1.59	0.83	18.9
1992	8.20	4.57	5.66	3.71	2.13	1.12	25.4
1993	9.72	5.42	6.71	4.39	2.53	1.32	30.1
1994	9.33	5.20	6.44	4.22	2.43	1.27	28.9
1995	14.7	8.17	10.1	6.63	3.81	2.00	45.4
1996	15.9	8.87	11.0	7.20	4.14	2.17	49.3
1997	16.9	9.43	11.7	7.65	4.40	2.31	52.4
1998	17.1	9.50	11.8	7.71	4.44	2.32	52.8
1999	18.0	10.0	12.4	8.12	4.67	2.45	55.6
2000	25.0	13.9	17.3	11.3	6.50	3.41	77.4
2001	26.3	14.7	18.2	11.9	6.84	3.58	81.4
2002	21.4	12.0	14.8	9.69	5.58	2.92	66.4
2003	27.3	15.2	18.9	12.4	7.11	3.72	84.6

¹Compiled by G.R. Matos and D.W. Olson.

End Uses of Industrial Diamond



Industrial Diamond End-Use Worksheet Notes

Data Sources

The sources of data for the industrial diamond end-use worksheet are the Commodity Data Summaries and the Mineral Commodity Summaries (MCS), annual mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey.

End Use

End use is defined as the use of the mineral commodity in a particular industrial sector or product. End-use estimates are derived by applying the reported percentages of end-use consumption to the calculated U.S. apparent consumption; actual consumption may be greater. For diamond industrial, end-uses are machinery manufacturing, mineral exploration, stone and ceramic production, construction, transportation, and other industrial uses.

Percentages of end use have not been available since 1996. It was assumed that market shares had the same percentage distribution as in the previous 13 years.

End-use data reported in this table differ from that reported in the MCS during the time period of 1975–2003. The categories have been grouped differently, and the data have been revised based on new information.

Machinery manufacturing—Diamond grit, powders, fragmented bort, and coatings are used in diamond grinding wheels, saws, impregnated and coated bits and tools. Loose diamond abrasive compounds are used for grinding, lapping, and polishing. Diamond tools are used for dressing and trueing grinding wheels and for cutting, machining, boring, and finishing.

Mineral exploration—Diamond is used primarily in drilling bits and shells in mineral, oil and gas exploration.

Stone and ceramic production—Diamond drills, saws, wiredrawing dies, and wheels are used in cutting, shaping, and polishing dimension stone and ceramics.

Construction—Diamond is used in foundation testing for dams and buildings, diamond bits and shells are also used in construction for masonry drilling of conduits, access, and testing of concrete in various structures.

Transportation—Diamond is used to bevel glass for vehicle windows and in the machining and finishing other parts of vehicles during their manufacturing. Diamond saws are used to cut and groove concrete for highway reconditioning.

Other end-uses—Diamond is used in slicing wafers for use in electronic and electrical devices, in finishing optical surfaces, for jewel bearings, in cutting and polishing gemstones, in wiredrawing dies, in cutting tools, in preparation of metallographic specimens, as well as in manufacturing and finishing other important items.

Blank cells in the spreadsheet indicate that data were not available. Data are rounded to no more than three significant digits; data may not add to totals shown.

References

U.S. Bureau of Mines, 1975–77, Commodity Data Summaries, 1975–77.

U.S. Bureau of Mines, 1978–95, Mineral Commodity Summaries, 1978–95.

U.S. Geological Survey, 1997–2005, Mineral Commodity Summaries, 1997–2005.

U.S. Geological Survey and U.S. Bureau of Mines, 1996, Mineral Commodity Summaries, 1996.

Recommended Citation Format:

(1) If taken from CD version:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, one CD-ROM. (Also available online at <http://pubs.usgs.gov/ds/2005/140/>.)

(2) If taken from online version:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at <http://pubs.usgs.gov/ds/2005/140/>. (Accessed [date].)

For more information, please contact:

[USGS Industrial Diamond Commodity Specialist](#)

U.S. Geological Survey, Data Series 140.