NATURAL ABRASIVES STATISTICS[1]
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) gross weight unless otherwise noted]
Last modification: April 1, 2014

TOTAL NATURAL ABRASIVES								
Year	Production	Shipments	Imports	Exports	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1900	4,410	3,910	11,900	NA	16,300	NA	NA	NA
1901	3,910	3,910	13,100	NA	17,000	NA	NA	NA
1902	3,860	3,860	8,030	NA	11,900	NA	NA	NA
1903	4,120	4,120	12,700	NA	16,800	NA	NA	NA
1904	17,700	1,740	8,200	NA	25,900	NA	NA	NA
1905	26,800	1,930	12,700	NA	39,400	NA	NA	NA
1906	1,050	1,050	16,200	NA	17,200	NA	NA	NA
1907	970	970	13,400	NA	14,400	NA	NA	NA
1908	607	607	9,000	NA	9,610	NA	NA	NA
1909	1,430	1,430	11,200	NA	12,600	NA	NA	NA
1910	933	933	30,500	NA	31,400	NA	NA	NA
1911	598	598	11,600	NA	12,200	NA	NA	NA
1912	900	900	17,600	NA	18,500	NA	NA	NA
1913	19,700	19,700	18,500	NA	38,300	NA	NA	116,000
1914	59,900	59,900	13,900	NA	73,700	16.9	276	111,000
1915	69,300	69,300	9,180	NA	78,600	13.4	216	96,400
1916	105,000	105,000	8,510	NA	114,000	13.0	194	131,000
1917	105,000	104,000	2,070	NA	107,000	20.2	257	135,000
1918	99,100	99,100	8,660	NA	108,000	25.6	276	123,000
1919	76,800	76,800	11,800	NA	88,600	24.7	233	129,000
1920	98,100	98,100	33,300	NA	131,000	28.3	230	152,000
1921	37,000	37,000	16,100	NA	53,100	46.5	423	104,000
1922	56,600	56,600	20,100	NA	76,700	31.8	309	122,000
1923	74,100	74,100	26,200	NA	100,000	34.1	325	148,000
1924	65,700	65,700	28,700	NA	94,400	40.3	384	158,000
1925	65,600	65,600	26,200	NA	91,900	41.2	385	165,000
1926	70,800	70,800	26,900	NA	97,700	41.0	376	149,000
1927	57,100	57,100	23,000	NA	80,100	43.7	408	57,100
1928	68,800	68,800	25,100	NA	93,900	38.0	362	78,800
1929	65,400	65,400	27,600	NA	93,100	35.4	337	65,400
1930	50,600	50,600	19,100	NA	69,600	31.4	308	50,600
1931	34,800	34,800	13,000	NA	47,700	25.7	275	34,800
1932	21,800	21,800	6,500	NA	28,300	28.0	333	21,800
1933	36,700	36,700	10,100	NA	46,600	27.3	342	36,700
1934	30,600	30,600	11,700	NA	42,300	31.7	386	30,600
1935	38,600	38,600	19,100	NA	57,700	29.3	349	38,600
1936	38,800	38,800	20,500	NA	59,300	30.9	362	38,800
1937	45,900	45,900	20,900	NA	66,800	30.3	343	48,200
1938	26,200	26,200	10,900	NA	37,100	34.8	402	27,800
1939	41,100	41,100	15,800	NA	56,900	31.6	370	43,500
1940	40,400	40,400	11,300	NA	51,800	23.3	271	44,400
1941	60,500	60,500	7,590	NA	68,100	22.4	248	66,700
1942	50,400	50,400	5,400	19,000	39,700	22.4	224	57,400
1943	42,400	42,400	6,080	19,000	30,400	21.8	206	48,000
1944	40,700	40,700	6,810	22,800	35,800	22.4	207	46,400
1945	42,400	42,400	7,200	27,100	37,800	24.0	218	52,400
1946	48,900	48,900	12,800	27,200	47,700	25.7	214	56,900
1947	53,000	53,000	15,700	34,300	52,600	28.0	204	61,000
1948	41,300	41,300	14,800	28,800	45,900	34.6	234	49,300
1949	34,900	34,900	10,200	639	44,600	36.9	253	43,900

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TOTAL NATURAL ABRASIVES								
Year	Production	Shipments	Imports	Exports	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1950	52,200	52,200	36,700	466	88,500	38.9	263	61,300
1951	53,700	53,700	23,300	610	76,200	40.9	256	71,000
1952	49,300	49,300	13,000	33,900	60,800	38.8	238	67,500
1953	48,000	48,000	11,500	52,400	60,000	42.3	258	57,100
1954	52,300	52,300	6,300	49,200	60,700	42.4	257	61,300
1955	59,300	56,800	9,690	61,600	72,200	45.6	278	73,600
1956	57,500	55,900	12,600	66,900	74,000	49.2	295	79,400
1957	62,100	56,300	16,100	68,300	84,300	46.7	272	71,200
1958	53,300	48,900	12,700	12,300	73,400	50.3	284	63,300
1959	59,100	54,300	17,100	11,400	84,500	56.2	314	66,400
1960	62,100	56,800	15,800	10,900	87,800	55.9	307	70,200
1961	57,400	52,000	14,400	11,600	83,200	55.2	302	64,700
1962	62,300	54,100	23,100	10,800	91,200	55.6	301	66,000
1963	69,000	58,200	29,400	12,400	86,100	45.0	239	75,100
1964	69,900	64,300	18,700	13,800	74,800	45.8	241	78,100
1965	77,500	71,800	18,400	11,900	83,900	46.2	239	87,500
1966	73,500	68,700	39,000	14,900	97,700	48.9	246	83,500
1967	66,800	57,800	16,300	12,700	70,500	50.6	247	76,600
1968	80,400	67,700	35,400	18,400	97,500	48.5	228	87,000
1969	79,800	66,700	20,900	14,500	86,200	46.6	207	86,600
1970	64,600	58,100	13,600	15,500	70,900	47.6	200	71,900
1971	71,700	62,600	10,900	9,590	81,500	57.3	230	165,000
1972	85,300	70,900	4,540	10,000	91,300	47.9	187	180,000
1973	97,900	84,700	12,700	16,200	105,000	47.9	176	205,000
1974	82,300	80,900	18,100	18,000	89,900	54.3	179	248,000
1975	78,900	64,500	6,350	9,690	85,500	57.4	174	159,000
1976	115,000	106,000	7,260	15,300	123,000	54.9	157	199,000
1977	116,000	107,000	12,700	17,600	123,000	57.5	155	196,000
1978	126,000	104,000	14,400	8,690	131,000	60.4	151	151,000
1979	126,000	106,000	19,900	4,460	141,000	61.8	139	159,000
1980	111,000	90,600	10,800	14,400	118,000	71.9	142	189,000
1981	99,600	83,400	12,300	16,200	104,000	88.8	159	171,000
1982	104,000	83,300	6,410	4,730	105,000	89.5	151	160,000
1983	102,000	94,200	8,920	4,450	106,000	103	168	146,000
1984	114,000	97,500	25,200	1,820	138,000	115	181	151,000
1985	110,000	99,100	28,700	884	138,000	107	162	142,000
1986	110,000	101,000	9,400	1,140	118,000	126	187	127,000
1987	107,000	98,400	16,800	1,520	122,000	137	196	117,000
1988	103,000	95,300	32,200	1,580	133,000	140	193	129,000
1989	106,000	89,600	24,000	12,400	117,000	138	182	136,000
1990	98,100	81,100	38,000	13,100	123,000	171	213	98,100
1991	90,900	73,900	30,000	12,600	108,000	179	215	126,000
1992	86,700	76,500	41,000	17,100	111,000	184	214	117,000
1993	94,500	78,600	57,000	13,100	138,000	199	225	124,000
1994	89,000	82,800	NA	NA	89,000	134	147	NA
1995	80,200	80,500	NA	NA	80,200	134	143	NA
1996	98,900	80,000	NA	NA	98,900	231	240	NA
1997	82,100	NA	NA	NA	82,100	203	206	NA
1998	80,200	NA	NA	NA	80,200	213	213	NA
1999	85,600	NA	NA	NA	85,600	238	233	NA

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TOTAL NATURAL ABRASIVES								
Year	**Production**	**Shipments**	**Imports**	**Exports**	**Apparent consumption**	**Unit value ($/t)**	**Unit value (98$/t)**	**World production**
2000	72,600	NA	NA	NA	72,600	221	210	NA
2001	61,200	NA	NA	NA	61,200	249	229	NA
2002	67,300	NA	NA	NA	67,300	250	227	NA
2003	69,900	NA	NA	NA	69,900	258	228	NA
2004	94,200	NA	NA	NA	94,200	207	179	NA
2005	91,300	NA	NA	NA	91,300	207	172	NA
2006	76,200	NA	NA	NA	76,200	242	202	NA
2007	96,600	NA	NA	NA	96,600	191	150	NA
2008	132,000	NA	NA	NA	132,000	129	98	NA
2009	79,700	NA	NA	NA	79,700	206	157	NA
2010	110,000	NA	NA	NA	110,000	182	136	NA
2011	73,700	NA	NA	NA	73,700	224	162	NA
2012	120,000	NA	NA	NA	120,000	157	112	NA

NA Not available.
[1]Compiled by T.D. Kelly (retired), T.P. Dolley, and D.W. Olson.
Data are estimated, calculated, or reported. See notes for more information.

NATURAL ABRASIVES STATISTICS[1]
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CORUNDUM AND EMERY NATURAL ABRASIVES											
Year	Corundum production	Corundum and emery production	Emery production	Corundum and emery shipments	Emery shipments	Corundum imports	Corundum and emery imports	Emery imports	Corundum exports	Corundum and emery exports	Emery exports
1900	NA	3,910	NA	3,910	NA	NA	11,900	NA	NA	NA	NA
1901	NA	3,910	NA	3,910	NA	NA	13,100	NA	NA	NA	NA
1902	NA	3,860	NA	3,860	NA	NA	8,030	NA	NA	NA	NA
1903	NA	4,120	NA	4,120	NA	NA	12,700	NA	NA	NA	NA
1904	NA	1,740	NA	1,740	NA	NA	8,200	NA	NA	NA	NA
1905	NA	1,930	NA	1,930	NA	NA	12,700	NA	NA	NA	NA
1906	NA	1,050	NA	1,050	NA	NA	16,200	NA	NA	NA	NA
1907	NA	NA	970	NA	970	NA	13,400	NA	NA	NA	NA
1908	NA	NA	607	NA	607	NA	9,000	NA	NA	NA	NA
1909	NA	NA	1,430	NA	1,430	NA	11,200	NA	NA	NA	NA
1910	NA	NA	933	NA	933	NA	30,500	NA	NA	NA	NA
1911	NA	NA	598	NA	598	NA	11,600	NA	NA	NA	NA
1912	NA	NA	900	NA	900	NA	17,600	NA	NA	NA	NA
1913	NA	NA	868	NA	868	NA	18,500	NA	NA	NA	NA
1914	NA	NA	440	NA	440	NA	13,900	NA	NA	NA	NA
1915	NA	NA	2,780	NA	2,780	NA	9,180	NA	NA	NA	NA
1916	NA	NA	13,900	NA	13,900	NA	8,510	NA	NA	NA	NA
1917	744	NA	15,500	NA	15,500	NA	2,070	NA	NA	NA	NA
1918	NA	NA	9,460	NA	9,460	NA	8,660	NA	NA	NA	NA
1919	NA	NA	2,360	NA	2,360	NA	11,800	NA	NA	NA	NA
1920	NA	NA	2,110	NA	2,110	NA	9,160	NA	NA	NA	NA
1921	NA	NA	277	NA	277	NA	6,950	NA	NA	NA	NA
1922	NA	NA	1,330	NA	1,330	NA	5,560	NA	NA	NA	NA
1923	NA	NA	2,070	NA	2,070	NA	11,700	NA	NA	NA	NA
1924	NA	NA	1,990	NA	1,990	3,020	50	6,600	NA	NA	NA
1925	NA	NA	698	NA	698	1,500	122	7,000	NA	NA	NA
1926	NA	NA	350	NA	350	4,910	394	4,310	NA	NA	NA
1927	NA	NA	459	NA	459	1,150	105	4,180	NA	NA	NA
1928	NA	NA	1,220	NA	1,220	1,420	154	4,920	NA	NA	NA
1929	NA	NA	838	NA	838	3,430	395	5,810	NA	NA	NA
1930	NA	NA	503	NA	503	2,740	272	3,860	NA	NA	NA
1931	NA	NA	464	NA	464	650	57	2,140	NA	NA	NA
1932	NA	NA	227	NA	227	171	10	611	NA	NA	NA
1933	NA	NA	958	NA	958	940	22	636	NA	NA	NA

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CORUNDUM AND EMERY NATURAL ABRASIVES											
Year	Corundum production	Corundum and emery production	Emery production	Corundum and emery shipments	Emery shipments	Corundum imports	Corundum and emery imports	Emery imports	Corundum exports	Corundum and emery exports	Emery exports
1934	NA	NA	171	NA	171	1,980	42	3,110	NA	NA	NA
1935	NA	NA	160	NA	160	4,590	52	4,360	NA	NA	NA
1936	NA	NA	295	NA	295	4,350	177	5,640	NA	NA	NA
1937	NA	NA	290	NA	290	1,890	149	4,860	NA	NA	NA
1938	NA	NA	0	NA	0	1,900	30	433	NA	NA	NA
1939	NA	NA	694	NA	694	1,780	59	1,990	NA	NA	NA
1940	NA	NA	949	NA	949	2,650	61	5,190	NA	NA	NA
1941	NA	NA	4,420	NA	4,420	5,320	47	0	NA	NA	NA
1942	NA	NA	4,790	NA	4,790	4,300	56	0	NA	2,900	411
1943	W	NA	6,050	NA	6,050	5,160	111	0	NA	1,050	327
1944	W	NA	6,300	NA	6,300	5,810	33	0	NA	272	338
1945	NA	NA	7,130	NA	7,130	5,660	34	0	NA	113	148
1946	NA	NA	5,610	NA	5,610	3,820	53	2,320	NA	196	240
1947	NA	NA	5,260	NA	5,260	2,180	52	2,820	NA	204	248
1948	NA	NA	4,900	NA	4,900	3,280	57	1,000	NA	58	126
1949	NA	NA	4,450	NA	4,450	1,830	2	1,380	NA	NA	
1950	NA	NA	5,400	NA	5,400	3,210	10	1,570	NA	NA	
1951	NA	NA	10,600	NA	10,600	4,310	9	2,580	NA	NA	
1952	NA	NA	9,390	NA	9,390	4,150	12	5	142	NA	693
1953	NA	NA	9,580	NA	9,580	2,430	30	9	216	NA	1,030
1954	NA	NA	8,850	NA	8,850	1,010	220	517	137	NA	1,180
1955	NA	NA	9,740	NA	9,740	1,270	513	793	141	NA	1,270
1956	NA	NA	11,000	NA	11,000	1,690	435	1,820	225	NA	1,760
1957	NA	NA	10,800	NA	10,800	3,720	655	1,240	189	NA	1,060
1958	NA	NA	6,970	NA	6,970	4,250	469	55	151	NA	1,000
1959	NA	NA	7,760	NA	7,760	3,030	8	1,080	83	NA	1,240
1960	NA	NA	7,410	NA	7,410	2,410	4	0	49	NA	1,030
1961	NA	NA	5,610	NA	5,610	2,170	15	1,020	87	NA	1,050
1962	NA	NA	3,920	NA	3,920	2,200	51	2,030	99	NA	747
1963	NA	NA	6,110	NA	6,110	1,850	NA	508	68	NA	575
1964	NA	NA	8,360	NA	8,360	1,790	NA	NA	140	NA	622
1965	NA	NA	9,730	NA	9,730	1,810	NA	NA	NA	NA	NA
1966	NA	NA	10,100	NA	10,100	2,720	NA	NA	NA	NA	NA
1967	NA	NA	W	NA	NA	1,810	NA	NA	NA	NA	NA

NATURAL ABRASIVES STATISTICS[1]
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CORUNDUM AND EMERY NATURAL ABRASIVES											
Year	Corundum production	Corundum and emery production	Emery production	Corundum and emery shipments	Emery shipments	Corundum imports	Corundum and emery imports	Emery imports	Corundum exports	Corundum and emery exports	Emery exports
1968	NA	NA	W	NA	NA	5,440	NA	NA	NA	NA	NA
1969	NA	NA	W	NA	NA	0	NA	NA	NA	NA	NA
1970	NA	NA	W	NA	NA	0	NA	NA	NA	NA	NA
1971	NA	NA	1,440	NA	NA	0	NA	NA	NA	NA	NA
1972	NA	NA	2,620	NA	NA	0	NA	NA	NA	NA	NA
1973	NA	NA	2,620	NA	NA	907	NA	NA	NA	NA	NA
1974	NA	NA	2,290	NA	NA	1,810	NA	NA	NA	NA	NA
1975	NA	NA	3,160	NA	NA	907	NA	NA	NA	NA	NA
1976	NA	NA	W	NA	NA	1,810	NA	NA	NA	NA	NA
1977	NA	NA	W	NA	NA	1,810	NA	NA	NA	NA	NA
1978	NA	NA	W	NA	NA	441	NA	NA	NA	NA	NA
1979	NA	NA	9,080	NA	NA	4,540	NA	NA	NA	NA	NA
1980	NA	NA	W	NA	NA	0	NA	NA	NA	NA	NA
1981	NA	NA	W	NA	NA	0	NA	NA	NA	NA	NA
1982	NA	NA	W	NA	NA	NA	NA	NA	NA	NA	NA
1983	NA	NA	W	NA	NA	NA	NA	NA	NA	NA	NA
1984	NA	NA	W	NA	NA	NA	NA	NA	NA	NA	NA
1985	NA	NA	W	NA	NA	NA	NA	NA	NA	NA	NA
1986	NA	NA	2,610	NA	NA	NA	NA	NA	NA	NA	NA
1987	NA	NA	1,760	NA	NA	NA	NA	NA	NA	NA	NA
1988	NA	NA	869	NA	NA	NA	NA	NA	NA	NA	NA
1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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CORUNDUM AND EMERY NATURAL ABRASIVES											
Year	**Corundum production**	**Corundum and emery production**	**Emery production**	**Corundum and emery shipments**	**Emery shipments**	**Corundum imports**	**Corundum and emery imports**	**Emery imports**	**Corundum exports**	**Corundum and emery exports**	**Emery exports**
2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	CORUNDUM AND EMERY NATURAL ABRASIVES										
Year	Corundum apparent consumption	Corundum and emery apparent consumption	Emery apparent consumption	Corundum unit value ($/t)	Corundum and emery unit value ($/t)	Emery unit value ($/t)	Corundum unit value (98$/t)	Corundum and emery unit value (98$/t)	Emery unit value (98$/t)	Corundum world production	Emery world production
1900	NA	15,800	NA	NA	26	NA	NA	510	NA	NA	NA
1901	NA	17,000	NA	NA	37	NA	NA	720	NA	NA	NA
1902	NA	11,900	NA	NA	27	NA	NA	510	NA	NA	NA
1903	NA	16,800	NA	NA	16	NA	NA	290	NA	NA	NA
1904	NA	9,940	NA	NA	33	NA	NA	600	NA	NA	NA
1905	NA	14,600	NA	NA	32	NA	NA	580	NA	NA	NA
1906	NA	17,200	NA	NA	42	NA	NA	760	NA	NA	NA
1907	NA	13,400	970	NA	NA	13	NA	NA	230	NA	NA
1908	NA	9,000	607	NA	NA	14	NA	NA	250	NA	NA
1909	NA	11,200	1,430	NA	NA	13	NA	NA	230	NA	NA
1910	NA	30,500	933	NA	NA	16	NA	NA	280	NA	NA
1911	NA	11,600	598	NA	NA	11	NA	NA	190	NA	NA
1912	NA	17,600	900	NA	NA	7	NA	NA	120	NA	NA
1913	NA	18,500	868	NA	NA	6	NA	NA	98.8	2,580	48,900
1914	NA	13,900	440	NA	NA	6	NA	NA	97.8	1,180	35,900
1915	NA	9,180	2,780	NA	NA	11	NA	NA	178	690	17,200
1916	NA	8,510	13,900	NA	NA	9	NA	NA	140	3,560	33,800
1917	744	2,070	15,500	91	NA	16	1,160	NA	204	6,140	31,300
1918	NA	8,660	9,460	NA	NA	12	NA	NA	130	5,860	22,100
1919	NA	11,800	2,360	NA	NA	10	NA	NA	94.2	1,690	12,500
1920	NA	9,160	2,110	NA	NA	10	NA	NA	81.5	1,210	14,000
1921	NA	6,950	277	NA	NA	8	NA	NA	72.8	835	13,800
1922	NA	5,560	1,330	NA	NA	13	NA	NA	126	2,020	14,800
1923	NA	11,700	2,070	NA	NA	14	NA	NA	133	2,980	24,100
1924	3,020	50	8,590	NA	NA	10	NA	NA	95.3	1,880	25,300
1925	1,500	122	7,700	NA	NA	8	NA	NA	74.5	1,910	28,000
1926	4,910	394	4,660	NA	NA	10	NA	NA	92.1	5,600	32,000
1927	1,150	105	4,640	NA	NA	13	NA	NA	121	NA	NA
1928	1,420	154	6,140	NA	NA	14	NA	NA	133	NA	10,000
1929	3,430	395	6,650	NA	NA	13	NA	NA	124	NA	NA
1930	2,740	272	4,360	NA	NA	12	NA	NA	118	NA	NA
1931	650	57	2,600	NA	NA	12	NA	NA	129	NA	NA
1932	171	10	838	NA	NA	12	NA	NA	143	NA	NA
1933	940	22	1,590	NA	NA	13	NA	NA	163	NA	NA

NATURAL ABRASIVES STATISTICS[1]
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	CORUNDUM AND EMERY NATURAL ABRASIVES										
Year	Corundum apparent consumption	Corundum and emery apparent consumption	Emery apparent consumption	Corundum unit value ($/t)	Corundum and emery unit value ($/t)	Emery unit value ($/t)	Corundum unit value (98$/t)	Corundum and emery unit value (98$/t)	Emery unit value (98$/t)	Corundum world production	Emery world production
1934	1,980	42	3,280	NA	NA	11	NA	NA	134	NA	NA
1935	4,590	52	4,520	NA	NA	10	NA	NA	119	NA	NA
1936	4,350	177	5,940	NA	NA	10	NA	NA	117	NA	NA
1937	1,890	149	5,150	NA	NA	10	NA	NA	113	2,300	NA
1938	1,900	30	433	NA	NA	10	NA	NA	113	1,540	NA
1939	1,780	59	2,680	NA	NA	10	NA	NA	117	2,460	NA
1940	2,650	61	6,140	NA	NA	10	NA	NA	116	3,910	NA
1941	5,320	47	4,420	NA	NA	10	NA	NA	111	6,210	NA
1942	4,300	41	4,380	NA	NA	10	NA	NA	100	7,030	NA
1943	5,160	36	5,720	NA	NA	11	NA	NA	104	5,630	NA
1944	5,810	30	5,960	NA	NA	10	NA	NA	92.6	5,700	NA
1945	5,660	25	6,980	NA	NA	11	NA	NA	100	10,000	NA
1946	3,820	19	7,700	NA	NA	11	NA	NA	91.9	8,000	NA
1947	2,180	13	7,830	NA	NA	13	NA	NA	95.0	8,000	NA
1948	3,280	8	5,780	NA	NA	14	NA	NA	94.7	8,000	NA
1949	1,830	2	5,830	NA	NA	14	NA	NA	95.9	9,000	NA
1950	3,210	10	6,970	NA	NA	14	NA	NA	94.7	9,070	NA
1951	4,310	9	13,100	NA	NA	15	NA	NA	94.0	9,980	7,360
1952	4,010	12	8,700	NA	NA	15	NA	NA	92.3	9,980	8,240
1953	2,210	30	8,560	NA	NA	15	NA	NA	91.6	9,070	NA
1954	868	220	8,190	NA	NA	15	NA	NA	90.9	9,070	NA
1955	1,130	513	9,260	NA	NA	16	NA	NA	97.3	7,260	7,080
1956	1,460	435	11,100	NA	NA	16	NA	NA	95.9	9,980	12,000
1957	3,530	655	11,000	NA	NA	17	NA	NA	98.6	9,070	NA
1958	4,100	469	6,030	NA	NA	18	NA	NA	102	9,980	NA
1959	2,940	8	7,610	NA	NA	19	NA	NA	106	7,260	NA
1960	2,360	4	6,390	NA	NA	19	NA	NA	104	8,170	NA
1961	2,090	15	5,570	NA	NA	19	NA	NA	104	7,260	NA
1962	2,110	51	5,200	NA	NA	18	NA	NA	97.1	3,660	NA
1963	1,780	NA	6,040	NA	NA	20	NA	NA	106	6,120	NA
1964	1,650	NA	7,740	NA	NA	21	NA	NA	111	8,190	NA
1965	1,810	NA	9,730	NA	NA	21	NA	NA	109	9,960	NA
1966	2,720	NA	10,100	NA	NA	21	NA	NA	106	9,910	NA
1967	1,810	NA	0	NA	NA	NA	NA	NA	NA	9,790	NA

NATURAL ABRASIVES STATISTICS[1]
U.S. GEOLOGICAL SURVEY
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	CORUNDUM AND EMERY NATURAL ABRASIVES										
Year	Corundum apparent consumption	Corundum and emery apparent consumption	Emery apparent consumption	Corundum unit value ($/t)	Corundum and emery unit value ($/t)	Emery unit value ($/t)	Corundum unit value (98$/t)	Corundum and emery unit value (98$/t)	Emery unit value (98$/t)	Corundum world production	Emery world production
1968	5,440	NA	0	NA	NA	NA	NA	NA	NA	6,570	NA
1969	0	NA	0	NA	NA	NA	NA	NA	NA	6,790	NA
1970	0	NA	0	NA	NA	NA	NA	NA	NA	7,250	NA
1971	0	NA	1,440	NA	NA	NA	NA	NA	NA	7,060	86,200
1972	0	NA	2,620	NA	NA	NA	NA	NA	NA	7,670	86,800
1973	907	NA	2,620	NA	NA	NA	NA	NA	NA	7,820	99,300
1974	1,810	NA	2,290	NA	NA	NA	NA	NA	NA	7,900	158,000
1975	907	NA	3,160	NA	NA	NA	NA	NA	NA	8,500	71,100
1976	1,810	NA	0	NA	NA	NA	NA	NA	NA	12,600	71,400
1977	1,810	NA	0	NA	NA	NA	NA	NA	NA	14,700	65,500
1978	441	NA	0	NA	NA	NA	NA	NA	NA	17,200	8,130
1979	4,540	NA	9,080	NA	NA	23	NA	NA	51.6	26,400	6,530
1980	0	NA	0	NA	NA	NA	NA	NA	NA	29,100	49,000
1981	0	NA	0	NA	NA	NA	NA	NA	NA	22,400	49,100
1982	NA	NA	0	NA	NA	NA	NA	NA	NA	18,800	38,000
1983	NA	NA	0	NA	NA	NA	NA	NA	NA	14,600	29,900
1984	NA	NA	0	NA	NA	NA	NA	NA	NA	9,220	28,100
1985	NA	NA	0	NA	NA	NA	NA	NA	NA	9,260	23,400
1986	NA	NA	2,610	NA	NA	NA	NA	NA	NA	9,220	7,500
1987	NA	NA	1,760	NA	NA	NA	NA	NA	NA	NA	9,970
1988	NA	NA	869	NA	NA	NA	NA	NA	NA	NA	26,800
1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29,500
1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35,500
1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,000
1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,000
1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NATURAL ABRASIVES STATISTICS[1]
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) natural abrasives unless otherwise noted]
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	CORUNDUM AND EMERY NATURAL ABRASIVES										
Year	Corundum apparent consumption	Corundum and emery apparent consumption	Emery apparent consumption	Corundum unit value ($/t)	Corundum and emery unit value ($/t)	Emery unit value ($/t)	Corundum unit value (98$/t)	Corundum and emery unit value (98$/t)	Emery unit value (98$/t)	Corundum world production	Emery world production
2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA Not available. W Withheld to avoid disclosing company proprietary data.
[1]Compiled by T.D. Kelly (retired), T.P. Dolley, and D.W. Olson.
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NATURAL ABRASIVES STATISTICS[1]
U.S. GEOLOGICAL SURVEY
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OTHER NATURAL ABRASIVES			
Year	**Imports**	**Exports**	**Apparent consumption**
1924	229	NA	229
1925	175	NA	175
1926	963	NA	963
1927	1,260	NA	1,260
1928	2,410	NA	2,410
1929	3,090	NA	3,090
1930	4,970	NA	4,970
1931	3,740	NA	3,740
1932	1,940	NA	1,940
1933	3,780	NA	3,780
1934	1,480	NA	1,480
1935	1,490	NA	1,490
1936	536	NA	536
1937	846	NA	846
1938	455	NA	455
1939	203	NA	203
1940	208	NA	208
1941	391	NA	391
1942	213	NA	213
1943	86	NA	86
1944	26	NA	26
1945	46	NA	46
1946	86	NA	86
1947	77	NA	77
1948	2	NA	2
1949	0	NA	0
1950	1	NA	1
1951	11	NA	11
1952	1,490	32,600	1,290
1953	340	50,600	2,570
1954	4	47,500	3,850
1955	29	59,600	5,130
1956	9	64,500	6,410
1957	20	66,700	7,690
1958	72	10,800	8,970
1959	245	9,550	10,200
1960	194	9,390	11,500
1961	168	10,300	12,800
1962	7,390	9,720	14,100
1963	27,000	11,600	15,400
1964	16,900	12,700	4,160
1965	16,600	11,900	4,610
1966	35,400	14,900	20,500
1967	14,500	12,700	1,800
1968	29,900	18,400	11,600
1969	20,900	14,500	6,360
1970	13,600	15,500	6,240
1971	7,260	9,590	6,130
1972	4,540	10,000	6,010
1973	11,800	16,200	5,890
1974	16,300	18,000	5,770
1975	5,440	9,690	5,650

NATURAL ABRASIVES STATISTICS[1]
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OTHER NATURAL ABRASIVES			
Year	**Imports**	**Exports**	**Apparent consumption**
1976	5,440	15,300	5,540
1977	10,900	17,600	5,420
1978	14,000	8,690	5,300
1979	15,400	4,460	10,900
1980	10,800	14,400	7,840
1981	12,300	16,200	4,760
1982	6,410	4,730	1,690
1983	8,920	4,450	4,470
1984	25,200	1,820	23,400
1985	28,700	884	27,800
1986	9,400	1,140	8,260
1987	15,900	1,520	14,400
1988	32,200	1,580	30,600
1989	24,000	12,400	11,600
1990	38,000	13,100	24,900
1991	30,000	12,600	17,400
1992	41,000	17,100	23,900
1993	57,000	13,100	43,900
1994	W	W	W
1995	W	W	W
1996	W	W	W
1997	W	W	W
1998	W	W	W
1999	W	W	W
2000	W	W	W
2001	W	W	W
2002	W	W	W
2003	W	W	W
2004	W	W	W
2005	W	W	W
2006	W	W	W
2007	W	W	W
2008	W	W	W
2009	W	W	W
2010	W	W	W
2011	W	W	W
2012	W	W	W

NA Not available. W Withheld to avoid disclosing company proprietary data.
[1]Compiled by T.D. Kelly (retired), T.P. Dolley, and D.W. Olson.
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NATURAL ABRASIVES STATISTICS[1]
U.S. GEOLOGICAL SURVEY
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SPECIAL SILICA STONE STATISTICS								
Year	Production	Shipments	Imports	Exports	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1900	502	NA	NA	NA	502	24.9	490	NA
1901	NA	NA	NA	NA	NA	NA	NA	NA
1902	NA	NA	NA	NA	NA	NA	NA	NA
1903	NA	NA	NA	NA	NA	NA	NA	NA
1904	16,000	NA	NA	NA	16,000	10.5	190	NA
1905	24,800	NA	NA	NA	24,800	11.2	202	NA
1906	NA	NA	NA	NA	NA	NA	NA	NA
1907	NA	NA	NA	NA	NA	NA	NA	NA
1908	NA	NA	NA	NA	NA	NA	NA	NA
1909	NA	NA	NA	NA	NA	NA	NA	NA
1910	NA	NA	NA	NA	NA	NA	NA	NA
1911	NA	NA	NA	NA	NA	NA	NA	NA
1912	NA	NA	NA	NA	NA	NA	NA	NA
1913	NA	NA	NA	NA	NA	NA	NA	45,200
1914	43,800	43,800	NA	NA	43,800	19.5	318	58,000
1915	38,700	38,700	NA	NA	38,700	19.7	318	50,400
1916	51,900	51,900	NA	NA	51,900	18.6	278	53,800
1917	64,700	64,700	NA	NA	64,700	22.4	285	73,300
1918	71,500	71,500	NA	NA	71,500	29.3	316	76,200
1919	52,400	52,400	NA	NA	52,400	31.6	298	91,800
1920	59,500	59,500	24,200	NA	83,600	33.9	276	99,600
1921	25,500	25,500	9,150	NA	34,700	55.4	505	77,700
1922	27,900	27,900	14,600	NA	42,400	44.8	435	77,300
1923	47,500	47,500	14,500	NA	62,000	41.5	396	95,500
1924	37,900	37,900	18,800	NA	56,700	51.8	494	105,000
1925	38,200	38,200	17,500	NA	55,700	53.1	495	108,000
1926	41,900	41,900	16,400	NA	58,300	52.0	479	82,200
1927	33,000	33,000	16,300	NA	49,200	55.7	522	NA
1928	36,700	36,700	16,100	NA	52,900	49.7	474	NA
1929	30,100	30,100	14,900	NA	45,000	50.4	480	NA
1930	20,700	20,700	7,240	NA	27,900	46.3	452	NA
1931	10,100	10,100	6,400	NA	16,500	44.7	479	NA
1932	8,140	8,140	3,770	NA	11,900	39.9	475	NA
1933	16,800	16,800	4,680	NA	21,400	35.1	440	NA
1934	11,800	11,800	5,100	NA	16,900	47.2	574	NA
1935	13,600	13,600	8,610	NA	22,200	44.8	533	NA
1936	12,600	12,600	9,830	NA	22,500	49.0	575	NA
1937	13,900	13,900	13,100	NA	27,100	49.2	557	NA
1938	6,090	6,090	8,120	NA	14,200	60.8	703	NA
1939	10,000	10,000	11,700	NA	21,800	54.1	634	NA
1940	12,100	12,100	3,220	NA	15,300	41.1	479	NA
1941	29,500	29,500	1,830	NA	31,300	27.9	309	NA
1942	29,700	29,700	832	15,700	14,900	28.1	281	NA
1943	22,800	22,800	726	17,600	5,930	30.3	286	NA
1944	17,600	17,600	941	22,200	7,230	32.2	298	NA
1945	18,700	18,700	1,460	26,900	8,520	34.6	313	NA
1946	17,000	17,000	6,550	26,800	9,820	38.4	321	NA
1947	16,400	16,400	10,600	33,800	11,100	39.4	288	NA
1948	12,000	12,000	10,500	28,600	12,400	45.5	308	NA
1949	7,300	7,300	7,010	639	13,700	49.0	336	NA
1950	7,180	7,180	31,900	466	38,600	48.5	328	NA

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SPECIAL SILICA STONE STATISTICS								
Year	Production	Shipments	Imports	Exports	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1951	9,110	9,110	16,400	610	24,800	52.4	329	NA
1952	7,730	7,730	7,340	443	14,600	52.9	325	NA
1953	5,620	5,620	8,680	464	13,800	60.2	368	NA
1954	5,640	5,640	4,560	383	9,820	57.2	347	NA
1955	4,470	4,470	7,080	506	11,100	59.0	359	NA
1956	5,610	5,610	8,610	447	13,800	73.3	439	NA
1957	5,300	5,300	10,500	388	15,400	62.4	362	NA
1958	3,650	3,650	7,840	347	11,100	83.6	472	NA
1959	3,330	3,330	12,800	518	15,600	94.6	530	NA
1960	2,300	2,300	13,200	459	15,100	105	578	NA
1961	2,260	2,260	11,000	203	13,100	105	572	NA
1962	2,410	2,410	11,500	193	13,700	108	583	NA
1963	2,440	2,440	35	100	2,380	104	554	NA
1964	2,890	2,890	0	285	2,610	101	531	NA
1965	3,270	3,270	0	NA	3,270	132	683	NA
1966	3,450	3,450	907	NA	4,360	149	750	NA
1967	2,450	2,450	0	NA	2,450	234	1,142	NA
1968	2,850	2,850	0	NA	2,850	221	1,035	NA
1969	3,000	3,000	0	NA	3,000	200	888	NA
1970	2,840	2,840	0	NA	2,840	234	983	NA
1971	2,130	2,130	3,630	NA	5,760	264	1,062	NA
1972	2,940	2,940	0	NA	2,940	228	889	NA
1973	3,140	3,140	0	NA	3,140	212	778	NA
1974	2,840	2,840	0	NA	2,840	252	833	NA
1975	2,680	2,680	0	NA	2,680	396	1,200	NA
1976	2,450	2,450	0	NA	2,450	574	1,644	NA
1977	2,000	2,000	0	NA	2,000	556	1,495	NA
1978	612	612	0	NA	612	538	1,345	NA
1979	539	539	0	NA	539	519	1,165	NA
1980	572	572	0	NA	572	501	991	NA
1981	2,270	474	0	NA	2,270	483	866	NA
1982	1,170	647	0	NA	1,170	474	801	NA
1983	999	546	0	NA	999	482	789	NA
1984	1,170	620	0	NA	1,170	515	808	NA
1985	1,050	402	0	NA	1,050	490	742	NA
1986	973	463	0	NA	973	515	766	NA
1987	1,380	598	907	NA	2,290	355	509	NA
1988	1,890	371	0	NA	1,890	299	412	NA
1989	898	377	NA	NA	898	164	216	NA
1990	3,710	450	NA	NA	3,710	61.9	77.2	NA
1991	2,210	272	NA	NA	2,210	72.9	87.2	NA
1992	1,730	340	NA	NA	1,730	138	160	NA
1993	528	267	NA	NA	528	456	513	NA
1994	328	487	NA	NA	328	674	741	NA
1995	501	419	NA	NA	501	539	577	NA
1996	854	410	NA	NA	854	260	270	NA
1997	843	445	NA	NA	843	266	270	NA
1998	649	438	NA	NA	649	284	284	NA
1999	697	475	NA	NA	697	263	257	NA
2000	553	312	NA	NA	553	286	270	NA
2001	705	393	NA	NA	705	332	305	NA

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SPECIAL SILICA STONE STATISTICS								
Year	**Production**	**Shipments**	**Imports**	**Exports**	**Apparent consumption**	**Unit value ($/t)**	**Unit value (98$/t)**	**World production**
2002	748	386	NA	NA	748	321	291	NA
2003	1,070	513	NA	NA	1,070	293	259	NA
2004	227	655	NA	NA	227	581	502	NA
2005	193	576	NA	NA	193	989	825	NA
2006	227	328	NA	NA	227	4,370	3,530	NA
2007	231	508	NA	NA	231	4,420	3,470	NA
2008	W	W	NA	NA	W	W	W	NA
2009	W	W	NA	NA	W	W	W	NA
2010	W	W	NA	NA	W	W	W	NA
2011	W	W	NA	NA	W	W	W	NA
2012	156	500	NA	NA	156	250	177	NA

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[1]Compiled by T.D. Kelly (retired), T.P. Dolley, and D.W. Olson.
Data are estimated, calculated, or reported. See notes for more information.

NATURAL ABRASIVES STATISTICS[1]
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) gross weight unless otherwise noted]
Last modification: April 1, 2014

TRIPOLI STATISTICS						
Year	Production	Shipments	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1913	18,900	18,900	18,900	11.5	189	19,500
1914	15,600	15,600	15,600	9.50	155	16,200
1915	27,900	27,900	27,900	4.63	74.7	28,100
1916	39,200	39,200	39,200	5.48	81.9	39,800
1917	23,600	23,600	23,600	14.3	182	24,200
1918	18,100	18,100	18,100	11.0	119	18,600
1919	22,000	22,000	22,000	8.24	77.6	22,700
1920	36,500	36,500	36,500	15.6	127	37,400
1921	11,200	11,200	11,200	19.0	173	12,000
1922	27,400	27,400	27,400	11.6	113	27,900
1923	24,600	24,600	24,600	15.6	149	25,500
1924	25,800	25,800	25,800	15.1	144	26,300
1925	26,700	26,700	26,700	16.3	152	27,500
1926	28,500	28,500	28,500	18.4	169	29,300
1927	23,700	23,700	23,700	18.9	177	NA
1928	30,900	30,900	30,900	18.0	172	NA
1929	34,500	34,500	34,500	15.8	151	NA
1930	29,400	29,400	29,400	17.3	169	NA
1931	24,200	24,200	24,200	12.8	137	NA
1932	13,400	13,400	13,400	17.4	207	NA
1933	18,900	18,900	18,900	18.5	232	NA
1934	18,600	18,600	18,600	17.7	215	NA
1935	24,800	24,800	24,800	15.4	183	NA
1936	25,800	25,800	25,800	15.2	178	NA
1937	31,700	31,700	31,700	14.2	161	NA
1938	20,100	20,100	20,100	16.4	190	NA
1939	30,400	30,400	30,400	15.4	181	NA
1940	27,400	27,400	27,400	13.4	156	NA
1941	26,600	26,600	26,600	15.9	176	NA
1942	15,900	15,900	15,900	17.1	171	NA
1943	13,500	13,500	13,500	18.1	171	NA
1944	16,700	16,700	16,700	18.1	168	NA
1945	16,600	16,600	16,600	18.5	168	NA
1946	26,300	26,300	26,300	20.9	175	NA
1947	31,400	31,400	31,400	24.0	175	NA
1948	24,400	24,400	24,400	29.0	196	NA
1949	23,200	23,200	23,200	29.8	204	NA
1950	39,700	39,700	39,700	29.6	200	NA
1951	34,000	34,000	34,000	32.5	204	NA
1952	32,200	32,200	32,200	32.4	199	NA
1953	32,800	32,800	32,800	34.7	212	NA
1954	37,800	37,800	37,800	38.6	234	NA
1955	45,100	42,600	45,100	42.3	257	NA
1956	40,800	39,300	40,800	41.1	246	NA
1957	46,000	40,200	46,000	41.4	240	NA
1958	42,700	38,200	42,700	41.7	235	NA
1959	48,100	43,200	48,100	43.7	245	NA
1960	52,400	47,100	52,400	41.7	230	NA
1961	49,600	44,100	49,600	42.0	229	NA
1962	56,000	47,800	56,000	42.8	231	NA
1963	60,500	49,700	60,500	42.7	227	NA

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TRIPOLI STATISTICS						
Year	Production	Shipments	Apparent consumption	Unit value ($/t)	Unit value (98$/t)	World production
1964	58,600	53,100	58,600	43.3	228	NA
1965	64,500	58,800	64,500	41.9	217	NA
1966	60,000	55,200	60,000	41.6	209	NA
1967	64,400	55,300	64,400	43.6	213	NA
1968	77,600	64,800	77,600	42.2	198	NA
1969	76,800	63,700	76,800	40.6	180	NA
1970	61,800	55,300	61,800	39.0	164	NA
1971	68,200	60,500	68,200	39.8	160	NA
1972	79,700	67,900	79,700	41.3	161	NA
1973	92,100	81,600	92,100	42.3	155	NA
1974	77,200	78,000	77,200	47.0	155	NA
1975	73,100	61,900	73,100	45.0	136	NA
1976	113,000	104,000	113,000	43.6	125	NA
1977	114,000	105,000	114,000	48.8	131	NA
1978	125,000	104,000	125,000	58.1	145	NA
1979	116,000	105,000	116,000	59.7	134	NA
1980	110,000	90,000	110,000	69.7	138	NA
1981	97,400	82,900	97,400	79.6	143	NA
1982	102,000	82,700	102,000	85.1	144	NA
1983	101,000	93,600	101,000	99.1	162	NA
1984	113,000	96,800	113,000	111	174	NA
1985	109,000	98,700	109,000	103	156	NA
1986	106,000	100,000	106,000	122	181	NA
1987	104,000	97,800	104,000	132	189	NA
1988	99,900	95,000	99,900	137	189	NA
1989	105,000	89,300	105,000	138	181	NA
1990	94,400	80,600	94,400	175	218	NA
1991	88,600	73,600	88,600	182	218	NA
1992	84,900	76,200	84,900	185	215	NA
1993	93,900	78,300	93,900	198	223	NA
1994	88,700	82,300	88,700	132	145	NA
1995	79,700	80,100	79,700	131	140	NA
1996	98,000	79,600	98,000	231	240	NA
1997	81,300	NA	81,300	202	205	NA
1998	79,600	NA	79,600	212	212	NA
1999	84,900	NA	84,900	238	233	NA
2000	72,000	NA	72,000	221	210	NA
2001	60,500	NA	60,500	249	229	NA
2002	66,600	NA	66,600	250	227	NA
2003	68,800	NA	68,800	258	228	NA
2004	94,000	NA	94,000	207	179	NA
2005	91,100	NA	91,100	205	171	NA
2006	76,000	NA	76,000	230	186	NA
2007	96,400	NA	96,400	180	141	NA
2008	132,000	NA	132,000	129	98	NA
2009	79,700	NA	79,700	206	157	NA
2010	110,000	NA	110,000	182	136	NA
2011	73,700	NA	73,700	224	162	NA
2012	120,000	NA	120,000	157	111	NA

NA Not available.

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Natural Abrasives Worksheet Notes

Data Sources
Sources of data for the natural abrasives worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR). The years of publication and corresponding years of data coverage are listed in the References section below.

Total Natural Abrasives

Production
Production data for 1900 to the most recent year were from the MR and the MYB. Production data for 1900 to the most recent year represent the total summed quantities of corundum, emery, special silica stones, and tripoli that were produced annually in the United States.

Imports
Import data for 1900–93 were from the MR and the MYB. Import data for 1900–93 represent the total summed quantities of corundum, emery, special silica stones, and other miscellaneous natural abrasives that were imported into the United States for consumption purposes.

Exports
Export data for 1942–93 were from the MYB. Export data for 1942–93 represent the total summed quantities of corundum, emery, special silica stones, and other miscellaneous natural abrasives that were exported from the United States to foreign recipients.

Apparent Consumption
Apparent consumption data for 1900 to the most recent year represent the total estimated quantities of natural abrasives that were consumed annually in the United States. Apparent consumption was estimated by summing the estimated apparent consumptions for corundum and emery, other natural abrasives, special silica stone, and tripoli.

Unit value ($/t)
Unit value data is defined as the value of 1 metric ton (t) of natural abrasives apparent consumption. Unit value data for 1914–2002 were estimated as the weight-averaged value special silica stone and tripoli.

Unit Value ($98/t)
The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production
World production data for 1913–93 were from the MR and the MYB. World production data for 1913–2000 represent the total summed quantities of corundum, emery, special silica stones, and tripoli that were produced annually throughout the world. For 1913–26, U.S. production was included as a constituent of the reported world production data for corundum, emery, special silica stone products, and tripoli. For 1927–93, U.S. production was not included as a constituent of the reported world production data for corundum, emery, special silica stone products, and tripoli in the MR and MYB statistics. Therefore, for 1927–93, total U.S. production data were added to the total world production data of corundum, emery, special silica stone products, and tripoli presented in the natural abrasives table.

Corundum and Emery

Corundum and emery data were reported separately for some years and combined for some years. The column headings on the corundum and emery worksheet indicate the manner in which the data were reported. Blank cells in the worksheet indicate that data either were not available or were withheld from publication because they are proprietary. All data from 1989 to the most recent year were withheld from publication because they are proprietary.

Production
Corundum production datum for 1917 represents the total quantity of corundum that was produced in the United States. Production data for 1943–44 were withheld because they were proprietary.

Corundum and emery production data for 1900–06 represent the total quantities of combined corundum and emery that were produced annually in the United States.

Emery production data for 1907–88 represent the total quantities of emery that were produced annually in the United States. For 1967–70, 1976–78, and 1980–84, production data were withheld because they are proprietary.

Imports
Corundum import data for 1924–81 represent the total quantities of crude corundum ore and ground corundum grains that were imported into the United States for consumption purposes.

Corundum and emery import data for 1900–23 represent the total quantities of corundum and emery that were imported into the United States for consumption purposes. Corundum and emery import data for 1924–62 represent the summed quantities of corundum and emery that were imported into the United States for consumption purposes but were not delineated separately as either a corundum or emery import.

Emery import data for 1924–63 represent the total quantities of crude emery ore, ground emery grains, and emery wheels and files that were imported into the United States for consumption purposes.

Exports
Corundum export data for 1952–64 represent the total quantities of corundum that were exported from the United States to foreign recipients.

Corundum and emery export data for 1942–48 represent the summed quantities of corundum and emery that were exported from the United States to foreign recipients but were not delineated separately as either a corundum or emery export.

Emery export data for 1942–64 represent the total quantities of emery that were exported from the United States to foreign recipients.

Apparent Consumption
Apparent consumption data for corundum for 1917 and 1924–81 represent the total estimated quantities of corundum that were consumed annually within the United States. Apparent consumption data for corundum for 1917 and 1924–81 were estimated by using the following formula:

APPARENT CONSUMPTION = PRODUCTION + IMPORTS – EXPORTS.

Apparent consumption data for corundum and emery for 1900–62 represent the total estimated summed quantities of corundum and emery that were consumed annually within the United States. Apparent consumption data for corundum and emery for 1900–62 were estimated by using the following formula:

APPARENT CONSUMPTION = PRODUCTION + IMPORTS – EXPORTS.

For 1942–48, estimates of apparent consumption yielded negative values. To better estimate apparent consumption for these years, apparent consumption data were interpolated from the apparent consumption data series.

Apparent consumption data for emery for 1907–88 represent the total estimated quantities of emery that were consumed annually within the United States. Apparent consumption data for emery for 1907–88 were estimated by using the following formula:

APPARENT CONSUMPTION = PRODUCTION + IMPORTS – EXPORTS.

Unit Value ($/t)
Unit value datum for corundum for the year 1917 was estimated by dividing the total value of domestically produced corundum by the total quantity of domestically produced corundum.

Unit value data for corundum and emery for 1900–06 were estimated by dividing the total value of domestically produced corundum and emery by the total quantity of domestically produced corundum and emery.

Unit value data for emery for 1907–66 and 1979 were estimated by dividing the total value of domestically produced emery by the total quantity of domestically produced emery. For 1967–70, 1976–78, and 1980–84, production data were withheld because they are proprietary. For 1971–75 and 1985–88, unit value could not be estimated because production value was not available.

Unit Value ($98/t)
The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production
World production data for corundum for 1913–26 include U.S. production data. World production data for corundum for 1937–86 do not include U.S. production data.

World production data for emery for 1913–26 include U.S. production data. World production data for emery for 1928, 1951–52, 1955–56, 1971–89, and 1991–93 do not include U.S. production data.

Other Natural Abrasives

Imports
Import data for other (miscellaneous) natural abrasives for 1924–93 represent the total summed quantities of burrstones, corundum, diatomaceous earth, emery, flint, garnet, rottenstone, tripoli, and other natural abrasive materials that were imported into the United States for consumption purposes, but were not delineated separately as individual commodities. Data from 1994 to the most recent year were withheld from publication because they are proprietary.

Exports
Export data for other miscellaneous natural abrasives for 1952–93 represent the total summed quantities of corundum, diatomaceous earth, emery, pumice, and other natural abrasive materials that were exported from the United States, but were not delineated separately as individual commodities. Data from 1994 to the most recent year were withheld from publication because they are proprietary.

Apparent Consumption
Apparent consumption data for other miscellaneous natural abrasives for 1924–93 represent the total estimated quantities of various miscellaneous natural abrasives that were consumed annually within the United States. Apparent consumption data for various miscellaneous natural abrasives were estimated by using the following formula:

APPARENT CONSUMPTION = IMPORTS – EXPORTS.

For 1952–62, 1970–77, and 1980–81, estimates of apparent consumption yielded negative statistical values. To better estimate apparent consumption for these years, apparent consumption data were interpolated from the apparent consumption data series. Data from 1994 to the most recent year were withheld from publication because they are proprietary.

Special Silica Stone

Production
Special silica stone production data for 1900, 1904–05, and 1914 to the most recent year represent the total quantities of special silica stones that were produced annually in the United States. For 1914–80, domestic production was equal to domestic shipments. In the year 1978, a shift in reporting production occurred. Grinding pebbles and tube mill liners were eliminated from the survey forms. Prior to 1978, production data included grinding pebbles, grind stones, tube mill liners, and whetstones. Beginning in 2008, production data were withheld from publication because they are proprietary.

Shipments
Special silica stone shipment data for 1914 to the most recent year represent the total quantities of special silica stones that were shipped to domestic recipients. For 1914–80, domestic production was equal to domestic shipments. In the year 1978, a shift in reporting production occurred. Grinding pebbles and tube mill liners were eliminated from the survey forms. Prior to 1978, shipment data included grinding pebbles, grind stones, tube mill liners, and whetstones. Beginning in 2008, shipments data were withheld from publication because they are proprietary.

Imports
Special silica stone import data for 1920–88 represent the total quantities of special silica stones that were imported into the United States for consumption purposes.

Exports
Special silica stone export data for 1942–64 represent the total quantities of special silica stones that were exported from the United States to foreign recipients.

Apparent Consumption
Apparent consumption data for special silica stones for 1900, 1904–05, and 1914 to the most recent year represent the total estimated quantities of special silica stones that were consumed annually within the United States. Apparent consumption data for special silica stones for 1900, 1904–05, and 1914 to the most recent year were estimated by using the following formula:

APPARENT CONSUMPTION = PRODUCTION + IMPORTS – EXPORTS.

For 1944–48, estimates of apparent consumption yielded negative statistical values. To better estimate apparent consumption for these years, apparent consumption data were interpolated from the apparent consumption data series.

Unit Value ($/t)
Unit value data for special silica stones for 1900, 1904–05, and 1914 to the most recent year were estimated by dividing the total value of domestically produced special silica stones by the total quantity of domestically produced special silica stones. For 1978–80 80, the MYB reports quantity and value for finished products which causes a large increase in reported value. The unit value data, for 1978–80, were interpolated to make the data series more uniform. The noticeable decline in value, for 1990–91, was caused by the entry into bankruptcy of one of the major producers of special silica stone. Beginning in 2008, value data were withheld from publication because they are proprietary.

Unit Value ($98/t)
The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production
World production data for special silica stones for 1913–26 includes U.S. production data.

Tripoli

Production
Tripoli production data for 1913–2002 represent the total quantities of tripoli that were produced annually in the United States. For 1913–54, domestic production was equal to domestic shipments.

Shipments
Tripoli shipment data for 1913–96 represent the total quantities of tripoli that were shipped to domestic recipients. For 1913–54, domestic production was equal to domestic shipments. For 1997 to the most recent year, shipments data were not available.

Apparent Consumption
Apparent consumption data for tripoli for 1913 to the most recent year represent the total estimated quantities of tripoli that were consumed annually within the United States. Apparent consumption data for tripoli for 1913 to the most recent year were estimated by using the following formula:

APPARENT CONSUMPTION = PRODUCTION.

Unit Value ($/t)
Unit value data for tripoli for 1913–96 were estimated by dividing the total value of tripoli shipments by the total quantity of tripoli shipments. For 1997 to the most recent year unit value was estimated by dividing total value of tripoli production by the total quantity of tripoli production.

Unit Value ($98/t)
The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

World Production
World production data for tripoli for 1913–26 includes U.S. production data.

References
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