



2007 Minerals Yearbook

STONE, DIMENSION [ADVANCE RELEASE]

STONE, DIMENSION

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U.S. production of dimension stone in 2007 was estimated to be 1.39 million metric tons (Mt) valued at \$275 million, which was a 4.5% increase in tonnage and a 3.8% increase in value compared with those of 2006 (table 1). Exports decreased in value by 2% to \$74 million, and imports for consumption increased in value by 1.5% to about \$2.54 billion, the lowest import value increase in several years. The value of apparent consumption was estimated to be \$2.7 billion. Trade data in this report are from the U.S. Census Bureau. All percentages in the report were computed using unrounded data.

In recent years, most dimension stone has been used in construction applications, with the largest portions being sold or used as ashlar and partially squared pieces, curbing, flagstone, and rough block for building and construction. Monumental stone, another major type, includes memorials of various kinds.

Dimension stone is a natural rock material quarried for the purpose of obtaining blocks or slabs that meet specifications as to size (width, length, and thickness) and shape. Color, grain texture and pattern, and surface finish of the stone also are normal requirements by both customers and the stone industry. Durability (a time measure of the ability of dimension stone to endure and maintain its essential and distinctive characteristics), strength, and the ability of the stone to take a polish are other important selection criteria.

Although various igneous, metamorphic, and sedimentary rocks are used as dimension stone, the principal rock types are granite, limestone, marble, sandstone, and slate. Other varieties of dimension stone that are normally considered to be special minor types include alabaster (massive gypsum) and soapstone (massive talc).

Description and Terminology

Scientific and commercial descriptions of various dimension stone types overlap. The scientific description of dimension stone types is focused primarily on the stone's geographic locality and mineralogical composition, whereas the commercial description is focused primarily on the locality and color of the stone. Furthermore, various combinations of the scientific and commercial descriptions are used by stone producers to market their stone products effectively. The descriptions that follow were adapted from Currier (1960, p. 1-10) and Barton (1968, p. 2-8).

Basalt and Traprock.—Commercial basalt and traprock includes igneous rocks that are too fine grained to be termed “black granite.” The name traprock is derived from the Swedish word “trappa,” which means step, because of the characteristic terraced or steplike appearance of certain basalt lava fields. This category includes extrusive igneous rocks, such as andesite, basalt, or dacite, and intrusive igneous rocks, such as

amphibolites, diabase, diorites, fine-grained gabbros, peridotites, and pyroxenites.

Granite.—Commercial granites include all feldspathic crystalline rocks of mainly interlocking texture and with individual mineral grains that are visible to the naked eye. This category includes such rock types as anorthosite, gneiss, granite, granodiorite, monzonite, syenite, and all other intermediate igneous and coarse-grained metamorphic rock types. Primary colors of commercial granites are white, gray, pink, and red; green and brown are secondary colors. Although black granites are also included in this category and range in color from dark gray to black, they are not true granites mineralogically but rather mafic rocks, such as diabases, diorites, gabbros, and similar rocks.

Greenstone.—Commercial greenstones are the result of the metamorphosis of basaltic rocks. Greenstone is named because of the predominance of greenish minerals, such as actinolite, chlorite, or epidote.

Limestone.—Commercial limestones are rocks of sedimentary origin that primarily are composed of calcium carbonate with or without magnesium. Included in this category are limestone, dolomite, dolomitic limestone, and travertine, which is a calcitic rock that is precipitated from hot springs.

Marble.—Commercial marble includes metamorphosed limestones and serpentine rocks, all of which are capable of taking a polish. An important member of this classification is serpentine marble, which is also known as verde antique, and comprises green-to-black serpentine, which is a hydrous magnesium silicate mineral that is crisscrossed by veins of lighter minerals, such as calcite or dolomite.

Sandstone.—Commercial sandstone is a lithified sand that chiefly comprises quartz or quartz and feldspar with a fragmental (clastic) texture. Sandstone contains interstitial cementing materials, such as calcite, clay, iron oxides, or silica. Arkose (abundant feldspar grains), graywacke (abundant angular rock fragments), and conglomerate (abundant rounded rock fragments) are included in this category. Other members of this category include bluestone, which is a dense, hard, fine-grained feldspathic sandstone that splits easily along planes into thin, smooth slabs; brownstone, which can be sawn or split, is a feldspathic sandstone of brown to reddish-brown color owing to abundant iron oxide; and flagstone, which is a sandstone, or sandy slate, typically red, tan or gray, that splits into large, thin slabs.

Slate.—Commercial slate is a microgranular metamorphic rock formed by the recrystallization of clay sediments, such as claystone, shale, or siltstone. Characterized by excellent parallel cleavage, slates may be easily split into relatively thin slabs.

Miscellaneous.—This category includes commercial dimension stone types that do not easily fall into the

aforementioned categories, such as soapstone, steatite, or talc, which contain various amounts of the mineral talc. Additional miscellaneous dimension stones include diatomite, mylonite, pumice, schist, tripoli, tuff, porous or scoriaceous volcanic rocks, or any other rocks used as building stones.

Production

Dimension stone production data for the United States are derived by the U.S. Geological Survey (USGS) from a voluntary canvass of U.S. quarry producers of rough and dressed dimension stone. Of the 214 dimension-stone-producing operations included in the survey for 2007, 57 (29%) responded, which represented 28% of the tonnage; the remaining tonnage was estimated based partly on prior years' reporting (table 1). Data in this report cover rough crude quarried stone, irregular-shaped and rectangular blocks, and more highly processed stone. A number of other terms also are used to describe further processing, such as "worked," "dressed," "finished," and "manufactured." These and other terms used by the dimension stone industry describe such features as the mineral composition of the rock, the shape of the product, the method of finishing a stone, and the type of finish applied. No adjustments are made in the data to account for the sometimes substantial losses in processing rough stone into dressed stone. Sold or used data are considered to be equivalent to production because changes in stocks are not surveyed.

In 2007, limestone accounted for 493,000 metric tons (t) (35%) of the total domestic dimension stone production of 1.39 Mt, followed by granite (32%), miscellaneous stone (17%), sandstone (12%), marble (3%), and slate (1%). Granite accounted for about \$106 million (38%) of the value of total domestic production of \$275 million, followed by limestone (34%), miscellaneous (11%), sandstone (8%), marble (5%), and slate (4%).

Production was reported in 34 States and Puerto Rico. Leading producer States were, in descending order by tonnage, Wisconsin, Indiana, Vermont, Massachusetts, and Georgia. These States accounted for about 58% of the domestic production. The leading producer States were, in descending order by value, Indiana, Wisconsin, Vermont, North Carolina, and Georgia. These States contributed about 48% of the value of domestic production (table 3).

The top five producing companies were Buechel Stone Corp. in Wisconsin; Rock of Ages Corp. in Vermont, North Carolina, and Pennsylvania; Fletcher Granite Co., Inc. in Massachusetts, Maine, and New Hampshire; Indiana Limestone Co., Inc. in Indiana; and Victor Oolitic Stone Co. in Indiana. These companies produced about 40% of domestic production in tonnage and about 27% of production value. The leading 14 companies accounted for 62% of total domestically produced tonnage and 53% of the value.

Rough stone blocks split or cut from a quarry face are transported to processing plants that typically are located at the quarry site, at least for preliminary sizing. Further dressing, which includes final sizing and finishing operations, such as decorating, edging, and polishing, also may be done at the quarry site.

Limestone.—Dimension limestone was produced by 31 companies from 39 quarries in 10 States. Production decreased in 2007 by 12% to 493,000 t from 559,000 t in 2006. The value decreased by 3% to \$93.3 million in 2007 from \$96.1 million in 2006. The top five producing States were, in descending order by tonnage, Indiana, Wisconsin, Texas, Minnesota, and Kansas. Indiana, Texas, and Wisconsin combined produced 86% of the U.S. tonnage and 80% of the value (table 5). Buechel Stone, Elliott Stone Co., Independent Limestone Co., Indiana Limestone, and Victor Oolitic Stone, which were the leading producers, accounted for 87% of all U.S. limestone tonnage and about 58% of the value.

Granite.—Dimension granite was produced by 34 companies operating 60 quarries in 17 States. Production was 453,000 t valued at \$106 million. Granite production tonnage increased by about 6% and the value increased slightly compared with those of 2006. The top five producing States were, in descending order by tonnage, Massachusetts, Georgia, Vermont, Wisconsin, and New Hampshire. Massachusetts accounted for 20% of the tonnage and 11% of the value of U.S. granite production (table 4).

Cold Spring Granite, Inc., Fletcher Granite, and Rock of Ages, which were the leading producers, accounted for 48% of U.S. granite production in tonnage and 49% of U.S. granite production in value.

Sandstone.—Dimension sandstone was produced by 22 companies that operated 25 quarries in 13 States. Production decreased by 11% to 173,000 t in 2007 from 195,000 t in 2006. The value decreased slightly to \$22.2 million in 2007 from \$22.4 million in 2006. The top five producing States were, in descending order by tonnage, Arizona, New York, Arkansas, Michigan, and Ohio (table 6).

American Sandstone, Finger Lakes Stone Co. Inc., Hackett Quarry Co., Jude Stone Quarry Co., and Oakley Valley Stone, Inc., which were the leading producers, accounted for about 71% of the tonnage and 54% of the value of domestic production.

Marble.—Marble was mined by four companies that operated seven quarries in six States. Production tonnage decreased slightly in 2007 to 45,700 t valued at \$12.7 million from 46,400 t valued at \$18.1 million in 2006 (table 10). Georgia was the leading producing State, followed by Vermont, Tennessee, Colorado, and Alabama. The leading producers were Georgia Marble Co. (a subsidiary of Polycor Inc.) and Vermont Quarries Co. Additional data have been withheld to avoid disclosing company proprietary information.

Slate.—Slate was produced by 13 companies that operated 16 quarries in 5 States. Production increased to 18,700 t in 2007 from 17,700 t in 2006. The value increased by 8% to \$12.1 million in 2007 compared with that of 2006 (table 12). The top producing States were Vermont, Pennsylvania, and California. The leading producers were Pennsylvania Big Red Slate Co. Inc., Quarry Slate Industries Inc., and U.S. Quarried Slate Products Inc. Additional data have been withheld to avoid disclosing company proprietary information.

Consumption

For the purposes of this report, apparent consumption is calculated to be production plus imports for consumption minus exports; changes in industry stocks are not considered because such data are not available. Value data are used in the apparent consumption calculation because tonnage data are not available for imports and exports.

Dressed stone represented 57% by tonnage and 66% by value of the total stone sold or used. The leading uses within dressed stone, by tonnage, were in other uses, which included panels and veneer, tile, blackboards, exports, and unlisted and unspecified uses (28%), ashlars and partially squared pieces (21%), and flagging (18%). Rough stone represented about 43% of the tonnage and 34% of the value of all dimension stone sold or used by domestic producers, which included exports. The leading uses of rough stone, by tonnage, were in building and construction (50%), and in monumental (18%) (table 7).

Uses for the different varieties of dimension stone varied considerably. The major uses of granite sold or used in 2007, by tonnage, were in curbing (29%), rough stone for exports and unlisted uses (22%), monumental rough stone (20%), and monumental dressed stone (14%) (table 8). Primary uses of limestone, by tonnage, were in rough blocks for building and construction (42%), and in dressed stone other uses, including curbing, panels, veneer, tile, and unlisted and unspecified uses (24%) (table 9). Primary uses of marble, by tonnage, were dressed stone, including slabs and blocks, flagging, monumental, panels and veneer, ashlars and partially squared pieces, tile, and other uses (62%), and rough blocks for building and construction (33%) (table 10). Primary uses of sandstone, by tonnage, were in dressed stone for flagging (64%) and rough blocks for building and construction (11%) (table 11). Dimension slate sold or used by producers in the United States in 2007, by tonnage, was principally for flooring (48%), roofing (23%), and flagging (13%) (table 12).

Overall, the value of apparent consumption of dimension stone in the United States was estimated to be \$2.7 billion in 2007; this was a slight increase compared with that of 2006.

Prices

The average 2007 value for dimension stone was \$197 per metric ton; this was a slight decrease from that of 2006 based on the USGS canvass. The average unit values for different types of dimension stone were granite, \$233 per ton; limestone, \$189 per ton; marble, \$278 per ton; sandstone, \$129 per ton; and slate, \$649 per ton. Available price data show considerable variation. Prices are substantially different not only for the kind of stone, but also for the appearance of the same kind of stone. Color, grain structure, and finish contribute significantly to price and marketability.

Foreign Trade

Exports.—In 2007, total exports of dimension stone decreased slightly in value to \$74 million compared with those of 2006; granite accounted for 54% of the export value.

The largest share of granite was exported to China (table 13). Although unreported, a significant amount of granite was probably reexported back to the U.S. market.

Imports.—The value of imports for consumption of dimension stone types increased slightly in 2007 to \$2.5 billion. Brazil was the major single source of imported granite in 2007, accounting for 38% by value. China, which continued to be a major source of granite, accounted for 22% of granite imports by value. Other important granite import sources included Italy (18%) and India (14%) (table 14). Italy also was a major source of rough and dressed marble imports (tables 15-16). Duties on imported dimension stone are listed in table 2.

World Review

World dimension stone production, including the United States, was estimated to be approximately 105 Mt in 2007. Although there was probably some small-scale production in the majority of the world's nations, dimension stone was produced and officially reported in about 22 countries. Global production of dimension stone continued to increase in 2007, particularly among countries in Asia. Additionally, China's production of dimension stone increased. The top five producing countries in 2007 were, in descending order by tonnage, China, India, Iran, Italy, and Turkey, and these countries accounted for about 70% of the world's production. The United States ranked 10th in world production of dimension stone in 2007 (Napoli, 2008, p. 89).

Outlook

Dimension stone sales in the near term are expected to remain level or decline. For residential and office building construction, growth in the use of dimension stone may decline as demand lessens in new home construction and new prestige markets for home improvement. Some sectors of the stone industry report that there is a lack of skilled labor at quarries and that, in recent years, competent masons have left the stone industry for more lucrative and higher paying building projects in the construction industry.

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TABLE 1
SALIENT U.S. DIMENSION STONE STATISTICS¹

(Thousand metric tons and thousand dollars)

	2003	2004	2005	2006	2007
<u>Sold or used by producers:²</u>					
Quantity	1,340	1,460	1,360	1,330	1,390
Value	268,000	281,000	269,000	265,000	275,000
Exports, value	63,500	63,700	66,100	76,000	74,300
Imports for consumption, value	1,390,000	1,790,000	2,180,000	2,500,000	2,540,000

¹Data are rounded to no more than three significant digits.

²Includes Puerto Rico and other U.S. possessions and territories.

TABLE 2
U.S. IMPORT DUTIES ON DIMENSION STONE

Tariff item	HTS ¹ code	NTR, ²	
		January 1, 2007	Non-NTR, ² January 1, 2007
Slate, rough blocks or slabs	2514.00.0000	Free	25% ad valorem.
Rough blocks or slabs of marble, travertine, other calcareous monumental or building stone:	2515.00.0000		
Marble and travertine:			
Crude or roughly trimmed	2515.11.0000	Free	\$22.95 per cubic meter.
Marble, merely cut	2515.12.1000	do.	13% ad valorem.
Travertine, merely cut	2515.12.2000	3.0% ad valorem	50% ad valorem.
Other calcareous stone alabaster	2515.20.0000	do.	Do.
Rough blocks or slabs of granite, porphyry, basalt, sandstone, other monumental or building stone:	2516.00.0000		
Granite:			
Crude or roughly trimmed	2516.11.0000	Free	\$8.83 per cubic meter.
Merely cut	2516.12.0000	2.8% ad valorem	60% ad valorem.
Sandstone:			
Crude or roughly trimmed	2516.21.0000	Free	\$5.30 per cubic meter.
Merely cut	2516.22.0000	3.0% ad valorem	50% ad valorem.
Other monumental or building stone	2516.90.0000	do.	Do.
Setts, curbstones, flagstones	6801.00.0000	2.8% ad valorem	60% ad valorem.
Worked monumental or building stone:	6802.00.0000		
Tiles and cubes under 7 centimeters square, granules	6802.10.0000	4.8% ad valorem	40% ad valorem.
Other stone and articles with a flat or even surface:			
Marble, travertine, and alabaster:	6802.21.0000		
Travertine	6802.21.1000	4.2% ad valorem	50% ad valorem.
Other	6802.21.5000	1.9% ad valorem	13% ad valorem.
Other calcareous stone	6802.22.0000	4.9% ad valorem	50% ad valorem.
Granite	6802.23.0000	3.7% ad valorem	60% ad valorem.
Other stone	6802.29.0000	6.0% ad valorem	30% ad valorem.
Other:			
Marble, travertine, and alabaster:	6802.91.0000		
Marble:			
Slabs	6802.91.0500	2.5% ad valorem	15% ad valorem.
Other	6802.91.1500	4.9% ad valorem	50% ad valorem.
Travertine:			
Travertine articles of subheading 6802.21.1000 that have been dressed or polished, but not further worked	6802.91.2000	4.2% ad valorem	50% ad valorem.
Other	6802.91.2500	3.7% ad valorem	40% ad valorem.
Alabaster	6802.91.3000	4.7% ad valorem	50% ad valorem.
Other calcareous stone	6802.92.0000	4.9% ad valorem	Do.
Granite	6802.93.0000	3.7% ad valorem	60% ad valorem.
Other stone	6802.99.0000	6.5% ad valorem	40% ad valorem.
Worked slate and articles:	6803.00.0000		
Roofing slate	6803.00.1000	3.3% ad valorem	25% ad valorem.
Other	6803.00.5000	Free	Do.

Do., do. Ditto.

¹Harmonized Tariff Schedule of the United States.

²Normal trade relations.

TABLE 3
DIMENSION STONE SOLD OR USED BY PRODUCERS IN
THE UNITED STATES, BY STATE¹

State	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Alabama	4,430	\$3,630	W	W
California	40,300	10,000	38,800	\$12,300
Colorado	18,200	2,400	W	W
Georgia	80,500	19,100	84,300	14,600
Indiana	233,000	39,000	236,000	37,800
Kansas	16,800	2,270	17,600	2,540
Maryland	14,100	1,750	26,100	3,560
Massachusetts	81,600	11,500	90,700	11,300
Minnesota	21,600	12,400	22,300	12,400
Montana	11,600	2,620	18,500	9,350
New York	39,100	3,860	49,600	6,450
North Carolina	41,000	17,800	41,100	17,800
Ohio	29,300	4,950	17,500	3,330
Oklahoma	3,040	502	16,500	2,100
Pennsylvania	38,000	12,800	31,200	12,600
South Carolina	9,230	850	9,230	850
Texas	31,300	12,600	43,800	13,900
Vermont	100,000	27,600	97,800	27,500
Virginia	5,640	631	5,640	631
Wisconsin	297,000	35,400	300,000	35,400
Other ²	223,000	47,100	248,000	50,700
Total	1,330,000	265,000	1,390,000	275,000

W Withheld to avoid disclosing company proprietary data; included with "Other."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes Arizona, Arkansas, Connecticut, Idaho, Maine, Michigan, Missouri, New Hampshire, New Mexico, South Dakota, Tennessee, Utah, Washington, West Virginia, Puerto Rico, and other U.S. possessions and territories.

TABLE 4
DIMENSION GRANITE SOLD OR USED BY PRODUCERS IN
THE UNITED STATES, BY STATE¹

State	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
California	17,300	\$5,810	17,300	\$5,810
Georgia	62,000	8,520	66,400	9,320
Massachusetts	81,600	11,500	90,700	11,300
South Carolina	9,230	850	9,230	850
Other ²	258,000	77,900	270,000	78,300
Total	428,000	105,000	453,000	106,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes Maine, Minnesota, Missouri, New Hampshire, New York, North Carolina, Oklahoma, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Wisconsin, and Puerto Rico and other U.S. possessions and territories.

TABLE 5
DIMENSION LIMESTONE SOLD OR USED BY PRODUCERS IN
THE UNITED STATES, BY STATE¹

State	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Indiana	231,000	\$39,000	236,000	\$37,800
Kansas	11,900	1,450	17,600	2,540
Other ²	316,000	55,700	239,000	53,000
Total	559,000	96,100	493,000	93,300

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes Arkansas, California, Minnesota, Ohio, Oklahoma, Texas, and Wisconsin.

TABLE 6
DIMENSION SANDSTONE SOLD OR USED BY PRODUCERS IN
THE UNITED STATES, BY STATE¹

State	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
New York	37,300	\$2,670	47,000	\$4,960
Other ²	157,000	19,800	126,000	17,300
Total	195,000	22,400	173,000	22,200

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes Arizona, Arkansas, California, Colorado, Idaho, Kansas, Michigan, New Mexico, Ohio, Oklahoma, Pennsylvania, Utah, Virginia, West Virginia, and Wisconsin.

TABLE 7
DIMENSION STONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE^{1,2}

Use	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Rough stone:				
Rough blocks for building and construction	294,000	\$45,500	301,000	\$42,300
Irregular-shaped stone	68,400	8,250	84,000	12,200
Monumental	102,000	20,200	108,000	19,300
Other ³	116,000	30,100	105,000	18,700
Dressed stone:				
Ashlars and partially squared pieces	147,000	27,000	170,000	33,200
Slabs and blocks for building and construction	25,600	5,230	31,700	7,210
Monumental	64,300	32,100	74,300	32,300
Curbing	129,000	20,500	132,000	20,800
Flagging	158,000	15,500	147,000	15,700
Flagging (slate)	1,800	685	2,490	953
Roofing slate	3,310	5,040	4,220	6,150
Structural and sanitary	2,260	2,740	1,970	2,630
Flooring slate	8,800	1,890	9,070	2,000
Other ⁴	213,000	50,300	224,000	61,700
Total	1,330,000	265,000	1,390,000	275,000

¹Includes Puerto Rico and other U.S. possessions and territories.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Includes flagging stone, exports, uses not specified, and uses not listed.

⁴Includes panels and veneer, tile, blackboards, exports, uses not specified, and uses not listed.

TABLE 8
DIMENSION GRANITE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE¹

Use	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Rough stone:				
Rough blocks for building and construction	46,900	\$10,400	59,100	\$10,000
Irregular-shaped stone	1,870	316	4,340	974
Monumental	86,800	16,500	89,400	18,600
Other ²	51,200	17,700	98,800	18,100
Dressed stone:				
Ashlars and partially squared pieces	1,580	1,420	2,710	1,280
Slabs and blocks for building and construction	646	523	731	595
Monumental	61,800	28,600	61,400	28,500
Curbing	129,000	20,500	131,000	20,700
Other ³	48,200	8,670	5,760	6,760
Total	428,000	105,000	453,000	106,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes exports and uses not listed.

³Includes panels and veneer, tile, uses not specified, and uses not listed.

TABLE 9
DIMENSION LIMESTONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE¹

Use	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Rough stone:				
Rough blocks for building and construction	203,000	\$27,900	205,000	\$27,600
Irregular-shaped stone	17,500	1,030	19,100	1,170
Monumental	W	W	W	W
Other ²	7,710	1,650	7,640	685
Dressed stone:				
Ashlars and partially squared pieces	99,600	17,600	110,000	17,800
Slabs and blocks for building and construction	19,500	3,600	19,500	3,100
Flagging	16,100	3,290	12,900	2,780
Other ³	196,000	41,000	119,000	40,200
Total	559,000	96,100	493,000	93,300

W Withheld to avoid disclosing company proprietary data; included with "Rough stone, other."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes exports, uses not listed, and uses indicated by symbol W.

³Includes curbing limestone, panels and veneer, tile, uses not specified, and uses not listed.

TABLE 10
DIMENSION MARBLE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE^{1,2}

Use	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Rough stone:				
Rough blocks for building and construction	18,800	\$4,710	15,000	\$3,230
Other ³	11,700	3,720	2,400	399
Dressed stone:				
Slabs and blocks for building and construction	W	W	W	W
Monumental	W	W	W	W
Flagging	W	W	W	W
Tile	W	W	W	W
Other ⁴	15,900	9,620	28,300	9,110
Total	46,400	18,100	45,700	12,700

W Withheld to avoid disclosing company proprietary data; included with "Dressed stone, other."

¹Includes Puerto Rico.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Includes monumental stone, uses not specified, and uses not listed.

⁴Includes slabs and blocks, flagging, monumental, panels and veneer, ashlar and partially squared pieces, tile, uses not listed, and uses indicated by symbol W.

TABLE 11
DIMENSION SANDSTONE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE¹

Use	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Rough stone:				
Rough blocks for building and construction	20,000	\$2,070	18,300	\$1,950
Irregular-shaped stone	17,700	2,460	16,100	2,130
Other ²	230	20	2,270	2,000
Dressed stone:				
Ashlars and partially squared pieces	26,000	4,160	17,900	2,960
Slabs and blocks for building and construction	W	W	W	W
Curbing	W	W	W	W
Flagging	122,000	9,940	111,000	9,770
Panels and veneer	1,450	349	W	W
Other ³	7,350	3,450	6,970	3,440
Total	195,000	22,400	173,000	22,200

W Withheld to avoid disclosing company proprietary data; included with "Dressed stone, other."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes flagging stone and uses not listed.

³Includes tile, curbing, exports, uses not specified, uses not listed, and uses indicated by symbol W.

TABLE 12
DIMENSION SLATE SOLD OR USED BY PRODUCERS IN THE UNITED STATES, BY USE¹

Use	2006		2007	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Flagging	1,800	\$685	2,490	\$953
Roofing	3,310	5,040	4,220	6,150
Structural and sanitary purposes	2,260	2,740	1,970	2,630
Flooring	8,800	1,890	9,070	2,000
Other ²	1,570	869	952	403
Total	17,700	11,200	18,700	12,100

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes uses not specified and uses not listed.

TABLE 13
U.S. EXPORTS OF DIMENSION STONE, BY TYPE¹

(Thousand metric tons and thousand dollars)

Type	2006		2007		Major destination in 2007 ²
	Quantity	Value	Quantity	Value	
Marble, travertine, alabaster worked ³	42	5,310	30	8,560	Turkey, 30%.
Marble, travertine, crude or roughly trimmed	2	1,420	3	1,860	Canada, 74%.
Marble, travertine, merely cut, by sawing or otherwise ⁴	3	3,030	5	2,910	Bahamas, 22%.
Granite, crude or roughly trimmed	99	34,600	106	36,000	China, 48%.
Granite, merely cut by sawing or otherwise ⁴	9	5,110	6	4,100	Canada, 38%.
Sandstone, crude or roughly trimmed	5	1,610	NA	NA	NA.
Sandstone, merely cut, by sawing or otherwise ⁴	4	1,540	NA	NA	NA.
Slate, worked and articles of slate	NA	4,820	NA	6,440	Finland, 41%.
Slate, whether or not roughly trimmed or merely cut ⁴	NA	655	NA	678	Canada, 73%.
Other calcareous monumental or building stone; alabaster ⁵	68	12,900	42	8,980	Canada, 96%.
Other monumental or building stone ⁶	13	5,020	20	4,850	Canada, 81%.
Total	XX	76,000	XX	74,300	

NA Not available. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²By value.

³Further worked than simply cut with a flat surface.

⁴Blocks or slabs.

⁵Crude, roughly trimmed, or merely cut into blocks or slabs. Other than marble and travertine (includes alabaster).

⁶Crude, roughly trimmed, or merely cut into blocks or slabs. Other than calcareous stone and alabaster, granite, sandstone, slate, dolomite, quartzite, and steatite.

Source: U.S. Census Bureau.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF DIMENSION GRANITE, BY COUNTRY¹

(Thousand dollars)

Country	Dressed										
	Worked granite									Total worked	Total dressed
	Rough granite ³	Simply cut ⁴	Not cut to size ⁵	Cut to size ²					Other		
				Maximum 1.5 centimeters	1.5-7.5 centimeters	Monumental minimum 7.5 centimeters	Building minimum 7.5 centimeters				
2006:											
Argentina	--	244	151	18	1,360	16	66	487	2,090	2,340	
Brazil	9,800	81,400	85,800	7,880	295,000	87	5,710	58,300	453,000	534,000	
Canada	4,250	825	442	3,650	17,200	8,630	4,600	6,330	40,800	41,700	
China	7,410	39,500	19,000	25,900	126,000	6,700	13,600	62,400	254,000	293,000	
Finland	--	--	--	8	119	--	--	34	161	161	
India	13,400	44,100	22,300	7,800	101,000	6,830	3,890	31,500	173,000	218,000	
Italy	4,330	30,200	43,700	5,380	162,000	--	7,180	62,900	281,000	311,000	
Japan	--	--	--	3	9	--	3	18	--	--	
Mexico	303	1,600	101	26	45	--	11	257	440	2,040	
Norway	251	21	--	5	189	--	--	6	200	221	
Portugal	--	17	45	14	324	2	48	200	633	650	
Saudi Arabia	90	159	365	3	2,180	--	26	203	2,780	2,940	
South Africa	1,520	108	88	79	4,190	--	2	479	4,840	4,950	
Spain	1,080	3,500	4,110	568	14,000	--	101	2,410	21,200	24,700	
Other	2,230	5,530	23,800	2,330	25,700	73	4,160	7,470	63,500	69,000	
Total	44,700	207,000	200,000	53,700	749,000	22,300	39,400	233,000	1,300,000	1,500,000	
2007:											
Argentina	273	204	307	3	1,710	11	13	241	2,290	2,490	
Brazil	8,990	76,500	96,900	7,090	302,000	67	5,200	63,400	475,000	551,000	
Canada	3,780	962	903	3,870	13,900	9,100	4,320	4,540	36,600	37,500	
China	8,510	36,600	22,300	23,200	140,000	10,300	17,600	67,900	281,000	318,000	
Finland	29	--	2	3	145	4	--	3	157	157	
India	9,890	47,600	20,900	6,500	94,000	7,230	4,010	25,200	158,000	205,000	
Italy	2,580	26,500	38,700	3,120	148,000	124	5,570	49,400	245,000	272,000	
Japan	6	2	--	--	--	--	--	32	32	34	
Mexico	313	1,300	20	--	15	2	10	702	749	2,050	
Norway	157	--	25	--	257	--	3	26	311	311	
Portugal	10	160	7	6	287	--	--	189	489	649	
Saudi Arabia	--	31	15	--	1,260	--	9	222	1,500	1,540	
South Africa	1,920	26	283	3	2,010	--	20	217	2,530	2,560	
Spain	677	2,120	1,660	262	10,700	--	227	2,120	14,900	17,100	
Other	1,280	6,400	18,800	4,540	24,200	40	3,460	8,050	59,100	65,500	
Total	38,400	198,000	201,000	48,600	738,000	26,900	40,500	222,000	1,280,000	1,480,000	

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²One or more faces worked more than simply cut.

³Normal quarry products. Includes crude or roughly trimmed and roughly cut by sawing or otherwise; Harmonized Tariff Schedule of the United States (HTS) codes 2516.11.0000, 2516.12.0030, and 2516.12.0060.

⁴Simply cut with a flat even surface; HTS code 6802.23.0000.

⁵Only one face worked more than simply cut; HTS code 6802.93.0010.

Source: U.S. Census Bureau.

TABLE 15
U.S. IMPORTS FOR CONSUMPTION OF MAJOR CATEGORIES OF DIMENSION MARBLE AND OTHER CALCAREOUS
STONE, BY COUNTRY¹

Country	Dressed							
	Marble, slabs ²		Marble, other ³		Other calcareous stone ⁴		Rough marble ⁵	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
2006:								
Brazil	3,800	\$3,440	1,340	\$797	2,020	\$1,820	67	\$41
Canada	17	39	381	823	186,000	5,300	2	2
China	36,200	24,800	61,400	51,000	34,500	13,800	2,470	1,800
France	367	573	565	1,130	9,720	13,000	4	16
Greece	7,660	10,400	5,830	8,870	905	1,070	--	--
India	6,540	5,020	5,320	4,370	4,530	2,000	120	58
Israel	4,920	3,650	8,150	8,150	39,000	18,700	106	79
Italy	84,400	114,000	60,700	84,400	45,400	36,700	1,060	1,680
Mexico	2,480	2,410	11,100	13,000	12,100	12,900	2,350	3,810
Portugal	2,680	2,620	3,540	3,300	33,100	12,100	40	166
Spain	45,900	41,300	42,300	41,300	44,500	35,000	1,360	1,290
Taiwan	1,030	1,020	2,010	2,780	432	586	4	6
Turkey	18,000	13,300	56,300	43,800	19,100	15,000	242	144
Other	18,100	15,100	30,500	27,600	68,500	29,800	497	692
Total	232,000	238,000	290,000	291,000	500,000	198,000	8,310	9,780
2007:								
Brazil	3,670	3,100	461	424	2,040	2,210	243	119
Canada	77	124	1,180	2,960	17,600	5,700	17	44
China	48,700	36,600	79,300	69,600	18,700	17,200	2,100	1,600
France	238	573	626	3,180	110,000	15,600	7	78
Greece	9,520	13,000	5,820	10,100	1,020	1,290	16	40
India	10,400	8,660	3,750	5,550	3,100	1,910	186	204
Israel	6,920	5,740	6,960	7,390	41,200	22,300	380	253
Italy	76,600	126,000	48,200	89,600	31,700	39,400	1,630	2,550
Mexico	1,460	1,730	8,420	10,200	31,800	12,800	794	1,370
Portugal	1,800	2,160	1,920	2,630	19,100	15,100	201	107
Spain	46,500	46,100	34,200	37,000	49,900	27,400	1,220	1,050
Taiwan	924	913	1,730	2,710	358	400	1	3
Turkey	30,100	22,200	63,800	52,600	22,900	17,600	1,510	540
Other	21,400	17,500	28,800	27,800	263,000	42,300	263	351
Total	258,000	284,000	285,000	322,000	612,000	221,000	8,560	8,310

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Worked more than simply cut with a flat surface; Harmonized Tariff Schedule of the United States (HTS) code 6802.91.0500.

³Merely cut by sawing or otherwise.

⁴Worked more than simply cut with a flat surface, other than marble and travertine; HTS code 6802.92.0000.

⁵Simply cut by sawing or otherwise into rectangular blocks or slabs; HTS code 2515.12.1000.

Source: U.S. Census Bureau as modified by the U.S. Geological Survey.

TABLE 16
U.S. IMPORTS FOR CONSUMPTION OF DIMENSION STONE, BY TYPE¹

Type		2006		2007		Major source for 2007 ²
		Quantity	Value (thousands)	Quantity	Value (thousands)	
Calcareous stone, other ³	metric tons	12,800	\$6,270	NA	NA	NA.
Marble and alabaster ⁴	do.	30,000	19,600	25,600	\$26,100	Italy, 28%.
Sandstone, cut, by sawing or otherwise ⁵	do.	10,000	3,420	NA	NA	Italy, NA.
Slate, roofing	million square feet	14	10,800	14	10,300	Canada, 40%.
Slate, roughly trimmed or simply cut ⁵	do.	21,900	8,460	16,500	5,740	China, 62%.
Slate, worked and articles of slate, and other ⁶	do.	NA	122,000	NA	112,000	India, 41%.
Travertine, monumental or building stone and articles thereof ⁷	do.	42,900	26,700	40,800	26,200	Turkey, 34%.
Travertine, worked monumental or building stone ⁸	do.	85,800	51,500	87,900	47,400	Turkey, 42%.
Other stone, monumental or building stone ⁹	do.	17,400	11,700	NA	NA	Turkey, NA.

do. Ditto. NA Not available.

¹Data are rounded to no more than three significant digits. Table does not include totals shown on tables 14 and 15.

²By value.

³Simply cut with a flat surface, other than marble, travertine, and alabaster.

⁴Simply cut with a flat surface.

⁵Rectangular blocks or slabs.

⁶Other than roofing, including agglomerated slate.

⁷Simply cut with a flat surface, other than tiles and granules.

⁸Dressed or polished but not further worked.

⁹Simply cut with a flat surface, other than granite, calcareous stone, alabaster, slate, dolomite, quartzite, and steatite.

Source: U.S. Census Bureau.