

6. Building Stones and Tiles

1. Definition of Category

Building stone is cut or polished natural stone or pulverized natural stone mixed with cement and resins to make artificial stone. Tile is fired ceramic tile made from a mixture of natural sand and stone (feld-spathic earthenware, potter's clay, etc.).

HS Numbers	Commodity
<building stones=""></building>	
2515.11-010, 12-010 6802.21-010, 91-011, 91-019 2516.11-000, 12-000 6802.23-000, 93-000	Marble (crude/slabs) Marble (sheet/processed) Granite (crude/slabs) Granite (sheet/processed)
2515.11-090, 12-090, 20-000 2516.21-000, 22-000, 90-000 6802.10-000, 21-090, 22-000, 29-0 91-090, 92-000, 99-000	Other (crude/slabs)
<tiles></tiles>	
6907.10-000, 90-000 6908.10-000, 90-000	Unglazed ceramic tiles Glazed ceramic tiles

Note 1: This list of HS numbers includes stone material used not only for building and architectural purposes but also as gravestones, stone lanterns, and stone sculptures.

Note 2: Slabs are stones merely cut into blocks or rectangular or square shape, by sawing or otherwise.

2. Import Trends

(1) Recent Trends in Building Stone and Tile Imports

The building stone used in Japan is mainly marble for building interiors and granite for exteriors. Industry sources say that virtually all marble is for building use, while about half of granite is used in gravestones and other non-building uses.

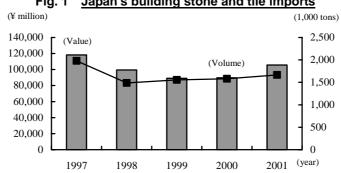


Fig. 1 Japan's building stone and tile imports

	1997		1998		1999		2000		2001	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Building stone (total)	1,918	112,444	1,434	94,330	1,492	84,070	1,503	84,141	1,570	98,492
Marble and the like	90	9,315	80	8,235	73	6,250	86	6,440	102	8,888
Granite, sandstone, and the like	1,806	100,085	1,327	83,735	1,394	75,804	1,383	75,422	1,429	86,322
Other building stone	22	3,044	27	2,360	25	2,016	33	2,279	39	3,282
Ceramic tile (total)	60	5,776	54	5,216	62	5,038	78	5,547	98	7,533
Unglazed ceramic tile	27	2,287	27	2,231	31	2,132	42	2,636	47	3,205
Glazed ceramic tile	33	3,489	28	2,985	32	2,906	37	2,911	50	4,328
TOTAL	1,978	118,220	1,488	99,546	1,555	89,108	1,581	89,688	1,667	106,025

Units: 1,000 tons, ¥ million Source: Japan Exports and Imports

Due to the decline in needs from construction industry, building stone imports fell as low as 1.43 million tons in 1998. However, this was followed by three straight years of growth. In 2001 imports totaled 1.57 million tons (up 4.5% from the year before), worth some ¥98.5 billion (up 17.1%). Moves in recent years to deregulate construction and to develop urban renewal plans have given rise to some large-scale redevelopment projects in central Tokyo. This has led to greater demand for building stone, which in turn has resulted in increased imports. Leading category is processed granite stones (HS No. 6802.93, 1.14 million tons worth ¥78.7 billion). In the category of marble stones, imports of sheet stones (including standard stone tiles) and other processed stone products are increasing. This is a result partly of producer nations' wish to shift from crude stone exports to exports of added value processed products, which accords with the wish of their Japanese counterparts to cut transportation costs and domestic processing costs. Also, this trend is believed to reflect a shift in Japanese market needs toward standard stone tile, a trend which will likely grow in the future.

Tile imports also fell as low as 54,000 tons in 1998, when there was a slump in construction-related demand. However, this was followed by three straight years of growth and a new all-time record in 2001 of 98,000 tons (up 25.6% from the year before), worth some \$7.5 billion (up 35.8%).

(2) Imports by Place of Origin

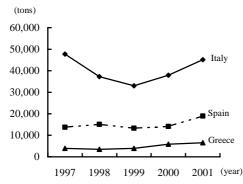
<Building stone>

1) Marble

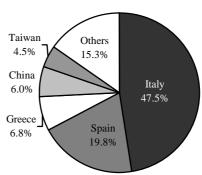
Italy and other EU nations supply the most marble to Japan and holds an approximately 80% share of the import market. Italy led with a share of 45.3% on a volume basis, and 47.5% on a value basis in 2001. Imports from Italy have recovered somewhat in the past two years, but still fall short of the 60,000 ton level reached at one time. In contrast, Spain (19.1%), Greece (6.6%) and China (4.4%) have both boosted their import shares, as a trend toward dispersion becomes evident in the import market.

Fig. 2 Principal exporters of marble to Japan

<u>Trends in import volume by leading exporters</u> (tons)



Shares of marble imports in 2001 (value basis)



	1997	1998	1999	20	2000		2001			
	Volume	Volume	Volume	Volume	ume Value Volume V		Volume		lue	
Italy	47,730	37,247	33,036	37,935	3,039	46,000	45.3%	4,226	47.5%	
Spain	13,750	15,100	13,303	14,102	1,003	19,373	19.1%	1,759	19.8%	
Greece	3,944	3,467	3,969	5,896	480	6,674	6.6%	608	6.8%	
Portugal	5,602	5,743	4,915	8,096	283	4,872	4.8%	534	6.0%	
China	2,216	2,459	2,903	3,210	310	4,422	4.4%	191	2.1%	
Other	16,293	15,957	15,231	17,049	1,324	20,167	19.9%	1,570	17.7%	
TOTAL	89,535	79,973	73,357	86,288	6,440	101,508	100.0%	8,888	100.0%	
(EU)	72,084	62,669	56,764	68,187	4,983	79,858	78.7%	7,042	79.2%	

Units: tons, ¥ million

Source: Japan Exports and Imports

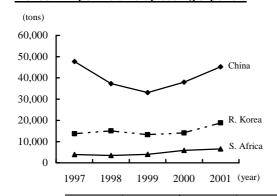
2) Granite

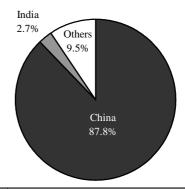
China accounted for the majority of Japan's granite imports, with 83.4% on a volume basis in 2001. Most of China's granite export to Japan are used as grave markers, but in recent years the competitive price of Chinese granite combined with China's improved processing technology have gained greater share in the filed of building stone. Next as exporters come the Republic of Korea, South Africa, and India, among others.

Fig. 3 Principal exporters of granite to Japan

Trends in import volume by leading exporters

Shares of granite imports in 2001 (value basis)





	1997	1998	1999	2000 2001)1	
	Volume	Volume	Volume	Volume	Value	Volu	ıme	Va	lue
China	1,219,399	970,866	1,084,048	1,121,742	63,585	1,192,492	83.4%	75,784	87.8%
R. Korea	126,477	70,549	68,334	36,682	2,431	59,155	4.1%	1,822	2.1%
S. Africa	103,110	73,397	65,266	56,408	1,747	45,463	3.2%	1,606	1.9%
India	138,478	69,818	67,447	54,623	2,679	40,372	2.8%	2,369	2.7%
Canada	48,713	36,363	20,847	25,567	567	28,226	2.0%	717	0.8%
Other	170,247	105,806	88,316	88,266	4,413	63,682	4.5%	4,025	4.7%
TOTAL	1,806,424	1,326,799	1,394,258	1,383,288	75,422	1,429,390	100.0%	86,322	100.0%
(E U)	93,139	54,691	46,283	44,087	2,641	33,087	2.3%	2,494	2.9%

Units: tons, ¥ million

Source: Japan Exports and Imports

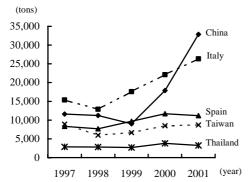
<Ceramic tile>

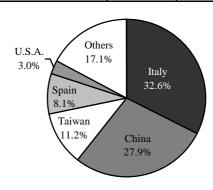
Imports of interior tile come mainly from Italy, Spain, and other European countries, while imports of exterior tile come mainly from China, Taiwan, and Thailand. 2001 saw an increase in imports both from China (32,854 tons, share 33.6%) and Italy (26,346 tons, 27.0% import share). China climbed above Italy into first place in the volume rankings for the first time.

Fig. 4 Principal exporters of ceramic tile to Japan

Trends in import volume by leading exporters

Shares of ceramic tile imports in 2001 (value basis)





	1997	1998	1999	2000		2001			
	Volume	Volume	Volume	Volume	Value	Vol	ume	Va	lue
China	11,629	11,242	9,014	17,901	1,033	32,854	33.6%	2,101	27.9%
Italy	15,383	12,902	17,572	22,102	1,810	26,346	27.0%	2,456	32.6%
Spain	8,308	7,699	9,671	11,674	590	11,190	11.5%	613	8.1%
Taiwan	8,935	5,964	6,662	8,504	712	8,720	8.9%	847	11.2%
Thailand	2,846	2,796	2,683	3,786	254	3,251	3.3%	226	3.0%
Other	13,103	13,839	16,820	14,152	1,148	15,325	15.7%	1,289	17.1%
TOTAL	60,204	54,442	62,422	78,119	5,547	97,686	100.0%	7,533	100.0%
(EU)	27,052	22,742	28,955	35,821	2,642	40,127	41.1%	3,441	45.7%

Units: tons, Ψ million

Source: Japan Exports and Imports

(3) Imports' Market Share in Japan

<Building Stone>

More than 90% of all crude stone is imported. The percentage is even higher for rough-cut (slab) sheet stone. However, the reverse is true for worked stone products. More than 90% of all such products are finished in Japan, since customers tend to prefer domestically-finished stone. There is virtually no domestic production of standard stone tile, so Japan relies on imports for nearly 100% of its supplies. By type of stone, Japan produces essentially no marble of its own, and relies on overseas sources for virtually all of its supplies. Japan has also come to rely on imports for about 90% of its supply of granite, due to the declining number of domestic quarries and rising quarrying.

<Ceramic tile>

Although imports has been increasing, imports still have only a 4.5% share of the Japanese market on a value basis.

Fig. 5 Imports' share in the Japanese market

	1996	1997	1998	1999	2000
Domestic production	184,059	183,951	147,015	123,990	125,186
Imports	4,593	5,776	5,216	5,039	5,547
Exports	4,472	4,648	4,775	6,715	6,559
Market total	184,180	185,079	147,456	122,314	124,174
Imports' share	2.5%	3.1%	3.5%	4.1%	4.5%

Unit: ¥ million

Source: Yearbook of General Merchandise Statistics, Japan Exports & Imports

3. Key Considerations related to Importing

(1) Regulations and Procedural Requirements at the Time of Importation

There are no legal regulations on the importation of building stones and ceramic tiles.

(2) Regulations and Procedural Requirements at the Time of Sale

There are no legal regulations on the sale of building stones and ceramic tiles. In Japan, the construction of all buildings, whether imported or not, is subject to regulations under the Building Standard Law. Also the sale or contract of housing is subject to provision of the Housing Quality Assurance Law.

1) Building Standard Law

The amended Building Standard Law went into effect in three stages, culminating in June 2000. The key amended provisions were the addition of performance standards along with the former specification standards, and the opening up of building confirmation and inspection procedures to the private sector.

• Specification standards: Material names, physical forms, and any particular specifications are

stipulated. The description may be specific and readily understandable, but difficult to cope with technological progress or trends in interna-

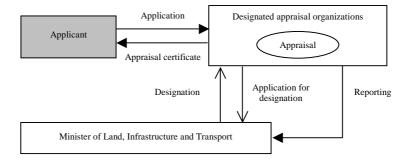
tional building standards.

• Performance standards: Physical performance values are stipulated, and if those performance

values are met, the object may be utilized with any structure, material,

or equipment or fixture.

Fig. 6 Performance appraisal flowchart



http://www.howtec.or.jp

Designated appraisal organizations

• The Building Center of Japan (BCJ)	TEL: 03-3434-7161	http://www.bcj.or.jp
• Japan Testing Center for Construction Materials (JT	ГССМ)	
	TEL: 03-3664-9216	http://www.jtccm.or.jp
• The Center for Better Living	TEL: 03-5211-0599	http://www.blhp.org
• General Building Research Corporation of Japan	TEL: 06-6872-0391	http://www.gbrc.or.jp

2) Housing Quality Assurance Law

• Japan Housing and Wood Technology Center

The Housing Quality Assurance Law mandates that new residential building purchase contracts on and after April 1, 2000 include a ten-year warranty against defects in basic structural components (including the beams, walls, floors, roofing, and other structural stress-bearing components and components that prevent water infiltration). For a period of ten years after completion, the seller bears the legal obligation to perform repairs or indemnify the purchaser.

(3) Competent Agencies

• Building Standard Law

Building Guidance Division, Housing Bureau, Ministry of Land, Infrastructure and Transport

TEL: 03-5253-8111 http://www.mlit.go.jp

TEL: 03-3589-1797

• Housing Quality Assurance Law

Housing Production Division, Housing Bureau, Ministry of Land, Infrastructure and Transport

TEL: 03-5253-8111 http://www.mlit.go.jp

• Building stone in general

Housing Industry, Ceramics and Construction Materials Division, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry

TEL: 03-3501-1511 http://www.meti.go.jp

• Ceramic tile in general

Paper Industry, Consumer and Recreational Goods Division, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry

TEL: 03-3501-1511 http://www.meti.go.jp

4. Labeling

(1) Legally Required Labeling

There is no legally required labeling for building stones and ceramic tiles.

(2) Voluntary Labeling based on Provisions of Law

1) Industrial Standardization Law (JIS Law)

Under the Industrial Standardization Law, standards are set for the quality of industrial products. Products meeting the JIS standards may be labeled with the JIS mark of approval. Products are designated which may be so labeled among the products covered by the JIS ("JIS Mark Labeling System"). Tiles are covered by the JIS mark system.

JIS Mark



For detail on the JIS mark, contact:

•Japanese Standards Association TEL: 03-3583-8005 http://www.jsa.or.jp

(3) Voluntary Industry Labeling

There is no voluntary industry labeling for building stones and ceramic tiles.

5. Taxes

(1) Customs Duties

Building stones are duty-free. Different tariff rates are applied for ceramic tiles to sub-classification by place of origin. The WTO rates are applied for imports from WTO member nations. Preferential rates (duty-free) are applied for imports from China, the Republic of Korea and other countries under Generalized System of Preferences. (see Fig. 7)

(2) Consumption Tax

(CIF + Customs duties) x 5%

Fig. 7 Customs duties on tile

HS No.	Description	Rate of Duty (%)					
ns no.	Description	General	WTO	Preferential	Temporary		
6907	Unglazed ceramic tiles	2.6%	1.7%	Free			
6908	Glazed ceramic tiles	3.2%	2.1%	Free			

Note: Refer to "Customs Tariff Schedules of Japan" (published by Japan Tariff Association) etc. for interpretation of tariff table.

6. Product Characteristics

(1) Building Stone

<Characteristics of various types>

Building stone is a natural resource product, and in many cases it is impossible to determine the color, water absorption rate, hardness and other product quality traits until after it is quarried. Nevertheless, distributors and customers alike want consistent quality and consistent supplies of stone.

1) Marble

Marble is very delicate yet also comparatively hard. Stone of just the right hardness is easy to finish, and when polished it has an attractive sheen and beautiful patterns in the stone. However, marble erodes easily in the rain, so it is mostly used for indoor walls and fixtures. There are many different colors of marble, including white, ivory, beige, red, black, green and brown. Marble differs little in terms of color or stone pattern by place of origin.

2) Granite

Granite is relatively abundant in nature. It is delicate in appearance yet also hard and very beautiful. Because granite has excellent durability it is well-suited for use in exterior walls, foyers and entrance ways that are exposed to rain and wind. Granite is also used to build retaining walls, and is used to make gravestones. Color and stone pattern are important considerations when using granite as building material. Granite comes in a variety of colors, including white, ivory, gray, black, brown, beige and pink. Stone colors are subject to shifting fashion trends, and when a particular color is used by a well-known architect or in a prominent building, people tend to buy the same color for a time.

3) Others (standard stone tile)

Another product attracting considerable attention as an alternative building material is granite stone tile in standard thickness of 6-20 mm. This standard stone tile is often produced from smaller blocks of crude stone that are unsuitable for use in other finished stone products. Recently there has come on the market a new type of lightweight granite building material known as ultra-thin sheet stone. This material is made from extra-thin (5-6 mm) sheet granite with ceramic or fiberboard backing. However, except for this ultra-thin sheet stone, Japan has almost no sheet stone production, and almost all of its supplies are imported from Italy, Spain, Portugal, the Republic of Korea and China. Another form of standard stone tile is so-called artificial stone, which is produced by pulverizing marble or other stone and adding cement or resin compounds as a hardening agent. Artificial stone's primary appeal is its lower cost compared to natural stone.

(2) Ceramic Tile

<Characteristics of various types>

The various types of tile include earthen ware tile, stoneware tile and porcelain tile. Earthen ware tile is favored for interior use, while porcelain and stoneware tile are preferred for exterior use. In Japan most users prefer porcelain tile for exterior use because its low moisture absorption helps prevent damage from freezing and thawing.

Firing Moisture Characteristics Glazing temperature absorption Clear surface, delicate and hard, emits metallic sound 1 300°C Glazed and Porcelain 0 - 1%when struck. Crushed surface exhibits seashell pattern. or above unglazed Lacks clarity of ceramic tile, but firing procedure results Around Glazed and Stoneware in low moisture absorption. Clay tile is included in this 1 - 5%1,200°C unglazed category Earthen Porous surface results in high moisture absorption. Pro-1.000°C 22% Usually duces a deep sound when tapped. or above or less glazed ware

Fig. 8 Varieties of ceramic tile

Imported tile often features superior styling, but some users complain that, unlike Japanese-made tile, imported tile often does not take into consideration joint and other masonry-related factors. For example, when made in Japan, 200 mm square tile indicates standard size with seams, and is made slightly smaller than 200 mm so that it will be 200 mm when finishing is complete. However, imported tile often comes in exactly 200 mm size.

<Characteristics of products from different countries/regions>

Italy

Italian ceramic tile is widely used in interior fixtures 200 mm square or more. The reason is that most Italian tile is earthen ware tile, which is not well-suited to exterior use. Italian tile is often used for traditional carvings of flowers, birds and trees, three-dimensional relief patterns and other stylish design work. Some famous designers also use Italian tile in their work.

Germany

Most imports from Germany consist of earthenware tile for interior use and stoneware tile for exterior use. German tile is known for its high quality.

China and Republic of Korea

Most imports from China and the Republic of Korea are mass-market products.

7. Domestic Distribution System and Business Practices

(1) Domestic Market Conditions

<Building stone>

Demand for building stone is influenced greatly by trends in commercial (non-residential) building and housing construction. In addition to the recent drop in the number of construction projects, builders are facing strong demands to cut construction costs, and this has led to a significant decline in the demand for building stone. In the Japanese building stone market, uniformity of finishing, color and pattern uniformity, and size accuracy are demanded more than in other countries. Recently, in particular, with the acute need to cut construction costs, building owners and design firms who use stone are insisting even more than in the past on a high level of product quality, as well as competitive prices.

Marble and other similar types of stone have an upscale, authentic image in the minds of Japanese people. There is widespread latent demand for stone in Japan, provided that the financial resources are available. Demand should resurface if the Japanese economy recovers, but prospects for economic recovery remain clouded, and people in the building stone industry are pessimistic about prospects for a rapid recovery in the building stone market. On the other hand, heretofore use of standard stone tile was limited to building interiors, but organic adhesive materials have made it possible to install standard stone tile on exterior walls. The moves in recent years to cut construction costs has made custom building stones uncompetitive in cost terms, and more and more of builders are starting to use standard stone tiles on exterior wall. Overseas manufacturers should establish their own in-house inspection programs even more carefully than custom building stone.

<Ceramic tile>

Market observers say there remains strong demand for upscale imported design tile. However, except for a few high-profile products, imported tile mainly serves to supplement domestic production. Heightened health concerns in Japan of late have prompted tile manufacturers to introduce antibacterial tile. Antibacterial agents can be mixed in with the glaze without altering the color, design, or sense of solidity, and their use are increasing not only in public restrooms, hospitals, cafeterias and other public spaces but also in residential housing.

(2) Distribution Channels

<Building stone>

Generally speaking, imported building stone is distributed from overseas quarry operators via Japanese importers to stone processors who perform cutting, polishing and other finishing operations, before being installed on-site by stone finishers. Stone finishing work is usually performed on a subcontracting basis for general contractors and home builders as part of the construction process.

1) Crude and slab stone

Most crude and slab stone is imported by specialty importers and then distributed to stone processors, or else imported direct by the stone processors themselves. Overseas quarry operators use fairly well established distribution channels.

2) Special order products

Stone processors perform special cuts on crude or slab stone on special order from builders. However, there often is no precise delineation between processor and finisher, and in practice many firms do both stone processing and stone finishing work. Since it is a form of construction process, stone finishers usually function as subcontractors under a general contractor.

3) Standard stone tile

Because standard stone tile does not require large-equipment machine processing, it is possible for importers other than building stone specialty importers to succeed. At the present time most importers are construction materials importers or major tile manufacturers.

Handling of building stone requires experience and technical resources in every phase of the process, including importing, processing, design and finishing. Large enterprises and their group affiliates handle the entire process from importation to installation. Recently, though, producer nations are increasingly shifting from exporting crude stone to added-value processed stones, and this enables Japanese stone finishers and general contractors to import directly and thereby circumvent the conventional distribution channels.

Fig. 9 Distribution channels of crude, slab stone and special order products

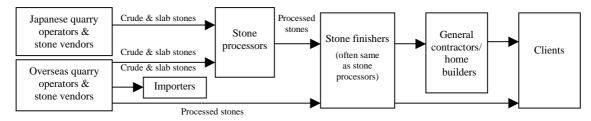
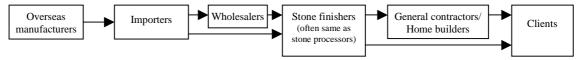


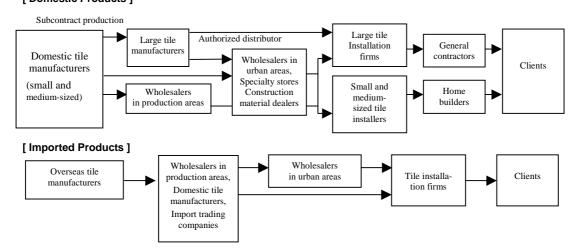
Fig. 10 Distribution channels of standard stone tile



<Ceramic tile>

Because interior tile production entails substantial capital investment, most of the manufacturers are large companies. These manufacturers usually do integrated production at their own factories, encompassing everything from raw material mixing to the finished product. On the other hand, since exterior tile, floor tile, and mosaic tile are small in size and needed in a wide variety of colors and shapes, most are produced by small and medium-sized enterprises, frequently on an OEM basis for large manufacturers. Large ceramic tile manufacturers sell their products through wholesalers in urban areas to installation firms, or directly sell to large installation firms. In the case of small and medium-sized manufacturers, their products are collected by local wholesalers in production areas, then sold to either wholesalers in urban areas or directly to installation firms.

Fig. 11 <u>Distribution channels of ceramic tile</u> [Domestic Products]



Ceramic tile installation is performed in most cases by tile installers working as subcontractors for general contractors or housing makers. Usually the direct user of the ceramic tile manufacturer's products is the tile installer. Sometimes, though, general contractors or housing makers procure ceramic tile directly from tile manufacturers to cut the costs and hire tile installers to do only the installation work. This has led to circumvent the conventional distribution channels and sluggishness in wholesalers in production areas. In recent years, clients, architectural design firms, and housing makers have been increasingly stipulating that particular brands or even particular models be ordered. It is up to the tile installer to decide where to buy the specified tile, and leading installation firms either do business directly with the ceramic tile manufacturer, or solicit estimates from multiple wholesalers and decide on that basis where to buy and at what price. Import trading companies generally import from abroad in container-size lots, store them at their own warehouses, and then sell to either distributors or installation firms. In some cases, leading domestic ceramic tile manufacturers also import direct from abroad in order to expand or supplement their product lines. In order to respond to the tendency above, leading tile manufacturers are strengthening their direct sales activities to architectural design firms and housing makers and increasing the number of imported products they carry to broaden their product lines and enable themselves to fulfill orders for many different types of tile.

(3) Key Considerations for entering the Japanese Market

<Building stone>

Entering the market for imported building stone is difficult because of the need to form relationships with large-scale users, such as stone processors and installers. There has been some new market entry from other business fields into the area of standard stone tiles. However, they have to undergo secondary processing before they can be sold to installers, and in some cases, the installers have to be trained. Also, there are vast differences in types of stone materials and in sizes in the case of standard stone tiles, and this makes it more difficult to maintain an adequate inventory, though this is essential to doing business.

<Ceramic tile>

Importers handle tile in one of two ways: either by maintaining a continuous inventory, or by special-ordering material as needed. In the latter case, importers keep only a small inventory on hand for use as samples. Typically the standard delivery time is 90 days from the date of order placement. Imported tile not only takes a lot longer to deliver than domestic tile, but also is frequently the object of complaints due to delivery delays. Foreign makers are expected to address delivery problems in some specific way.

8. After-Sales Service

None normally required. However, there are some cases (particularly involving marble) in which the actual condition and quality of the stone cannot be assessed until the crude stone is cut. Sometimes customer complaints also arise about product quality after delivery is made.

9. Related Product Categories

Related product categories include gravestones, stone lanterns, outdoor stones (for use as rubble stones and stepping stones in gardens) and flower vases and other decorative items. These products are subject to the same legal and regulatory environment as building stone.

10. Direct Imports by Individuals

There are no restrictions on direct imports for personal use with regard to quantity or any other factor. However, individuals should understand that considerable cost is involved in transporting stone material from abroad.

11. Related Organizations

There are no importer organizations that deal specifically with building stone or tile.

• The Building Stone Association of Japan TEL: 03-3866-0543 http://www.kenchikusekizai.org

• Japan Stone Traders Association TEL: 03-3440-1401

• Japan Ceramic Tile Manufacturer's Association TEL: 052-935-7235 http://www.tile-net.com