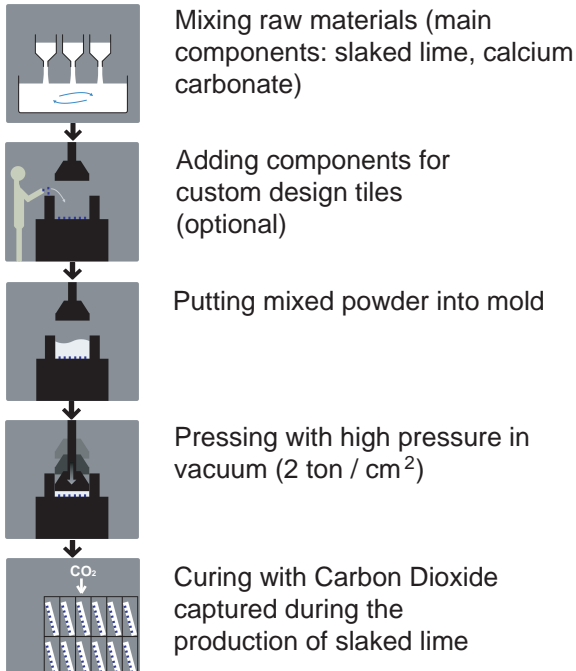


## Technical Data Sheet

### Introduction

**Limix** are limestone-based wall and floor tiles manufactured under extremely high pressure to achieve properties similar to marble. No chemical binder or resin is used to create its durable solid state. The proprietary technological process allows for various customized effects, colors and textures.

### Technology



### Measurement

#### Floor tiles

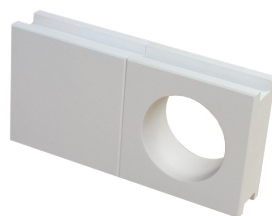
400 x 400 x 15mm (15.75" x 15.75" x 0.6")	600 x 600 x 18mm (23.6" x 23.6" x 0.7")
--	--

#### Wall tiles

400 x 400 x 10mm (15.75" x 15.75" x 0.4")	600 x 600 x 12mm (23.6" x 23.6" x 0.5")
--	--

#### Wall blocks

150 x 150 x 60mm  
(5.9" x 5.9" x 2.4")



**Width/length of tiles:** 600(400)mm ± 0.5mm  
**Curve/twist :** within 2mm  
**Chamfer:** trimming (wall tiles), C1 mm (floor tiles)  
**Custom sizes:** available upon request

### Physical properties

**Specific gravity:** 1.9-2.2 g/sq cm  
**Water absorption ratio:** 0.5%  
**Bend breaking load:** 90N/cm (10mm), 280N/cm (15mm)  
**Comprehensive strength:** 360 kg/sq cm  
**Abrasion resistance:** 0.016 g  
**Hardness (Moh's Hardness Test):** 7 (quartz)  
**Slip resistance (BPN):** 41 (wet), 62 (dry)  
**Heat conduction:** 1.84 kcal/m x h x °C  
**Thermal expansion:** 4-5 10<sup>-6</sup>/ °C  
**Thermal conductivity:** 5.2 x 10<sup>-3</sup>  
**Upper temperature limit:** 600 °C  
**Dowel Area Fixed Physical Strength Test (30mm thick):**

*Applicable standard and test location:* JASS 9T 201 Japan Testing Center for Construction Materials (JTCCM)

*Methodology and results:* A dowel pin was embedded in the side of the test body tile with the use of an adhesive and a plate was connected to the dowel pin. The plate was then pulled and the amount of load that produced failure was recorded. Result: both formed and freshly cut surfaces showed failure at a load of about 100 kgf / dowel pin.

#### Shock test (Hard Ball Drop Test):

*Applicable standard and test location:* BS 1281 U.K. Standards. Performed at Japan Tile Testing and Engineering Association

*Methodology and results:* A hard ball having a diameter of 19 mm, specific gravity of 7.85 and a mass of 28.35 was dropped on the test body from a height corresponding to the thickness of the test body (741mm for this test) and the test body was then checked for any resulting damage. Result: no damage indicated.

#### Frost damage resistance:

*Applicable standard and test location:* JIS A 5209 of Japan Tile Testing Association

*Methodology and results:* One test cycle consisted of eight hours at -20°C, six hours in water at normal temperature and then eight hours at -20 °C. Duration: 10 cycles. Result: no abnormalities detected.

*Applicable standard and test location:* JIS A 5209 of Japan Tile Testing Association

*Methodology and results:* One test cycle consisted of eight hours at -20°C, six hours in water at normal temperature and then eight hours at -20 °C. Duration: 10 cycles. Result: no abnormalities detected.

\* For more details please refer to Comparative Benchmark or contact us at:

#### Tagawa Sangyo Co., Ltd.

1924 Yugeta, Tagawa city, Fukuoka Pref.  
 826-0041 Japan  
 T: +81-905-285-0855 | F: +81-947-44-8484  
 info@shikkui.com | <http://www.shikkui.com>