

## Quality Standard for internal and external walls

The Japan Industrial Standard for Ceramic Tiles (JIS A 5209), along with its testing standards (JIS A 1509-1 to 13), serves as the unified standard for tiles in Japan. Additionally, we are dedicated to quality control through our own more rigorous internal standards, which are based on these JIS standards. For your reference, here is a notation of a part of the JIS product and testing standards.

characteristics					test method
Water absorption (Boiling or Vacuum)	%	Dry-pressed		B I : ≤ 3.0	JIS A 1509-3
		Extruded		A II : ≤ 10.0	
Breaking strength	N	Internal walls	External walls		JIS A 1509-4
			Surface area		
			< 60 cm <sup>2</sup>	≥ 60 cm <sup>2</sup>	
		≥ 108	≥ 540	≥ 720	
Thermal shock resistance		No damage			JIS A 1509-7
Crazing resistance		No crazing			JIS A 1509-8
Frost resistance		No damage			JIS A 1509-9
Resistance to chemicals	ammonium chloride solution, 100g/l.	Declared value			JIS A 1509-10
	hydrochloric acid solution, 3%	Declared value			
	citric acid solution, 100g/l	Declared value			
	potassium hydroxide solution, 30g/l	Declared value			
	sodium hypochlorite solution, 2.0g/l	Declared value			
Lead and cadmium release	μg/cm <sup>2</sup>	Declared value			JIS A 1509-11

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### Non-flammable

The reaction to fire performance of ceramic tiles may also be classified also as Class A1 according to EN 13501-1.

## Technical Data Sheet

1. Collection	<b>HOSOWARI BORDER Normal</b>
2. Category of tile	BI Unglazed tile
3. Length, Width & Thickness	235.0 x 19.5 x 13.5 (max) mm
4. Item number	HAL-20BN/HB-1...HB-13

characteristics		JIS A 5209
Length (mm)		235.0 ± 2.4
Width (mm)		19.5 ± 0.8
Crook (mm)	Length	≤ 2.0
	Width	≤ 1.0
Thickness (mm)		Specified by the manufacturer
Centre curvature (mm)		N/A
Torsion (mm)		N/A
Edge curvature (mm)		N/A
Straightness of sides (mm)		± 1.6
Rectangularity (mm)		N/A
Shape of back feet		N/A
Height of back feet (mm)		N/A
Water absorption (%) (Vacuum method)		≤ 3.0
Breaking strength (N)		≥ 540
Thermal shock resistance		N/A
Crazing resistance (-)		N/A
Frost resistance (-)		No damage
Resistance to chemicals (-)		Declared value

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### Note :

1. Testing methods are in compliance with JIS A5209:2020 and JIS A 1509.
2. Thickness is not specified by JIS because the surface of this shape is rough.

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