

洋風瓦

Western Roof Tile

SUPER MORAN S45

スーパーモラン S45



The distinctive S shape geometry
is a source of beauty,
the combination of East meets
West technology gives
peace of mind and the sense
of satisfaction in
an investment in quality.



洋風瓦
Western Roof Tile
SUPER MORAN S45



Natural Orange & Natural mocha



Cheek Brown



Antique Brown



Natural White

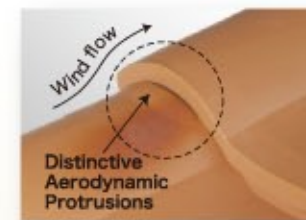


Sized to Fit 45 Tiles in 3.3m
Weight per tile is increased due to the large size of each tile, making it more resistant to high wind uplift forces.

Perfect Shape & Size

Earthquake & High Wind Resistant

SHIBAO Roof Tiles are uniquely shaped for earthquake and high wind resistance. Combined with breathability and energy efficient thermal resistance, SHIBAO Roof Tiles are high-performance disaster resistant tiles.



Distinctive Aerodynamic Protrusions

Added protrusions turn wind uplift forces into downforces, the resultant pressure pushing down on the tiles, making the structure even more high wind resistant.



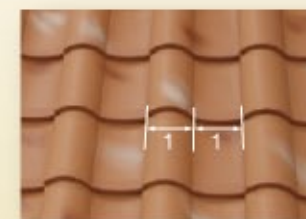
Interlocking Safety Lugs

Strategically placed interlocking lugs secure tiles to each other, preventing scattering during earthquakes and high wind conditions.



High Breathability for Condensation Prevention

Larger than traditional Japanese tiles, the overlacks form an air tunnel underneath the roof surface, which prevents condensation and so adds years to the roof. The tiles also increase thermal and sound resistance.



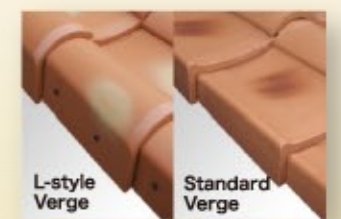
Beautifully Curved Form

The ratio of overlays to water courses is 1:1, creating a beautiful curvature and a sense of volume.



Eave Type Selection

Choose between an eave pantile or a thicker eave tile for the eaves.



Verge Type Selection

Choose between a rounded off or flush verge.

洋風瓦

Western Roof Tile
SUPER MORAN S45



Natural Orange



Silver Black



Leaf Green



Mat Black

Expert Water Resistance

Protecting your home against wind and rain

Not only beautiful.

The evolution of SHIBAO Water Resistance Technology.

Protecting your home by protecting the always exposed roof.



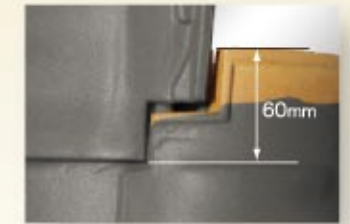
Weatherchecks and Raised Nail Holes

The two weatherchecks along the water course underlock and the three weatherchecks along the headlap break the force of wind-driven water and channels it back down the water course. The raised nail holes help prevent water seeping in.



Sharp Tail Edge and Third Weathercheck

The sharp tail edge together with the third headlap weathercheck immediately below it on the underlapping tile helps to speed running water along and prevent burbling.

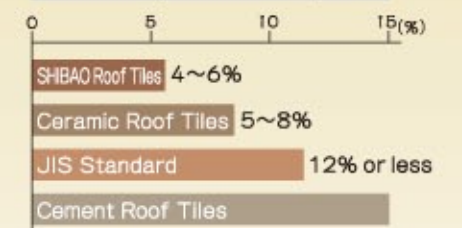


60mm Headlap

Ample headlap together with triple weatherchecks on the underlapping tile helps to block wind-driven rain.

Low Moisture Absorption as Proof of Strength

Water Absorption Ratio Comparison



Conducted by Shimane Institute of Industrial Technology (JISA-5208 Standard Methods of Testing) JIS Standard water absorption rate of glaze tiles are regulated to 12% or less



Slate and ceramic tile roofs constructed at approximately the same time. The slate roof will need maintenance in about ten years.

Ceramic roof tiles are non-combustible materials certified by MLIT.

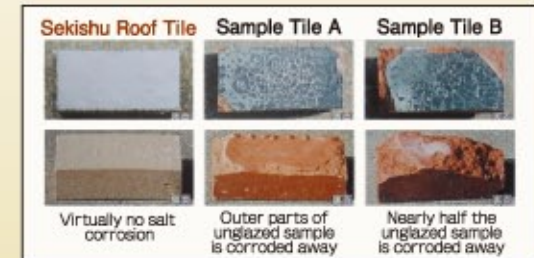
MLIT/Ministry of Land, Infrastructure, Transport and Tourism

Comparison of Sintering Temperatures for Roof Tiles

Sekishu Roof Tile	Sample Tile A	Sample Tile B
1200°C or more	1100°C~1150°C	970°C~1100°C

Conducted by Sekishu Tile Industry Association

Salt/Frost/Weather Corrosion Resistant



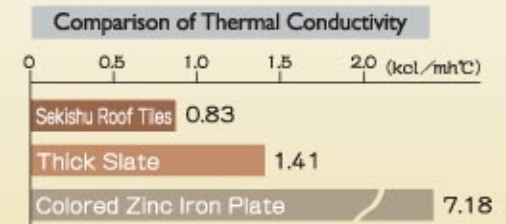
Salt Attack Test AS/NZ4456 Standard Methods of Testing
Conducted by Shimane Institute of Industrial Technology Tiles were immersed in sodium sulfate aqueous solution then dried, cycled 40 times.

The Sekishu Tradition

Outstanding Durability

High quality white clay with a low iron content is fire baked at over 1200°C, resulting in a stone hard Sekishu tile that never fades. Dirt also cleans off easily, making it the ideal roof tile.

Summer Cool Winter Warm



Conducted by Sekishu Tile Industry Association



The expression of the color of the roof changes in combination with the color of the walls.

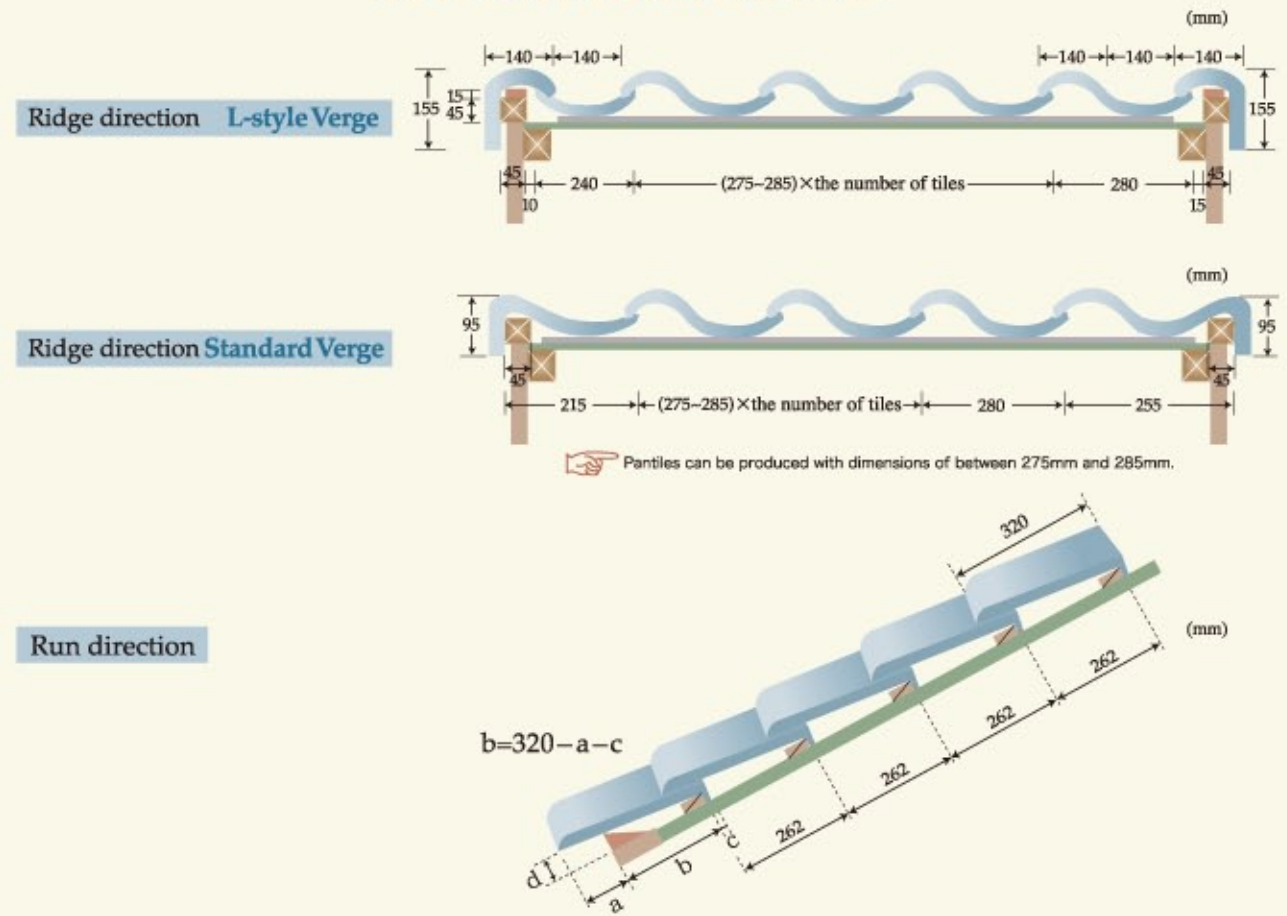


COLOR CHOICE



- The colors of the tiles may differ slightly from this printed pamphlet.
- Colors and shapes are subject to change without notice.
- For some products prices differ depending on color. Kindly consult a contractor for details.

洋風瓦 Western Roof Tile SUPER MORAN S45



High functionality enables roof construction of even a gradual slope, giving more freedom in design.

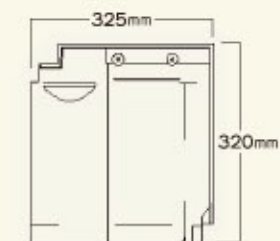
Standard Roof Pitch and Run Length of SUPER MORAN S45

Pitch	Length of run 4m	6m	8m	10m	12m
3.0	10				
3.5	10				
4.0	10				
4.5	10				
5.0	10				
5.5	10				

- ⚠ These performance values are not guaranteed. Please consider the following points about the area, the type of building, etc.
- For ultra-low slopes, the use of underlayment and vertical runners as secondary waterproofing is advised.
- For low slopes, eave tiles with the same gradient as the pantiles is advised.
- For low slopes, sealing the nailholes of the snowstoppers with caulking is advised.

Product Specifications of the field tile

Actual size (L × W)	Working size (L × W)
320mm × 325mm (±4mm)	260mm × 280mm (±4mm)
Number of tile	
13.6pcs. / m ²	45pcs. / 3.3m ²



”Using the best for the longest period of time”
is at the heart of eco-friendliness. 

Characteristics of Ceramic Roof Tiles

Since ceramic roof tiles are made from natural materials, the following characteristics that may appear to be defects are in fact not, and users can be assured of quality.

【Color Irregularity】

Depending on subtle differences in the chemical makeup of the clay and the environment in the firing kiln, subtle color irregularities may occur.

【Finely Cracked Surface】

Fine cracks that occur on the glaze surface is a natural phenomenon due to the difference in the rate of contraction of the clay and glaze when heated.

【Pinholes】

Tiny holes from air trapped in the glaze or as a result of organic matter contained in the clay may appear after tiles are baked.

Safety Considerations when Installing Ceramic Roof Tiles

- Consulting a specialized contractor for the installation of a ceramic roof is advised.
- In areas with severe winters, strong winds, or with projects involving middle to high-rise buildings, consulting a specialized contractor is advised.
- For specific design requirements and for to adhere to building standards and practices, consulting a specialized contractor is advised.



Shibao Co., Ltd.
658-1 Shirotsuki, Minakami-cho, Ohda-shi, Shimane 694-0303, Japan
TEL : +81-854-89-0201 FAX : +81-854-89-0276

●Shimane ●Fukuoka ●Hiroshima

<http://www.shibao.co.jp/> ✉ info@shibao.co.jp



本社 / 〒694-0303 島根県大田市水上町白環658-1 TEL 0854-89-0201 FAX 0854-89-0276
九州営業所 / 〒820-0607 福岡県嘉穂郡桂川町大字土師3461-4 TEL 0948-65-3803 FAX 0948-65-3914
福岡ビジネスセンター / 〒731-1526 広島県山県郡北広島町本地605-1 TEL 0826-73-0587 FAX 0826-73-0588

November, 2018 printing. Colors and shapes are subject to change without notice.

総合防災 All-round Protection
Ultra 3S Tile

Sekishu Minakami
石州水産
せきしゅうみなかみ

Sekishu Roof Tiles For Your Precious Home



Cool Japan

Sekishu Minakami
SHIBAO KAWARA

The finest
multifunctional
disaster resistant tile

Ultra 3S Tile SUPER

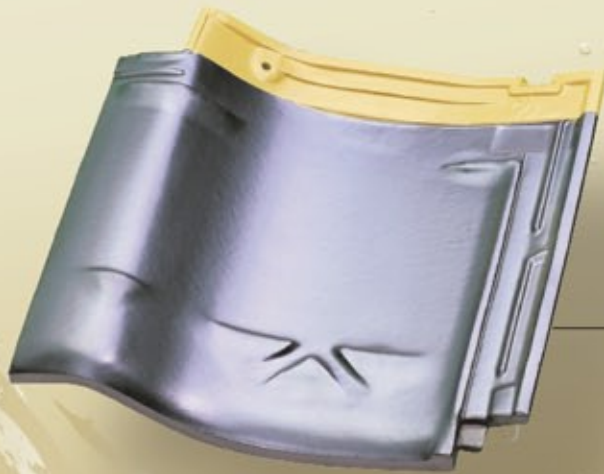
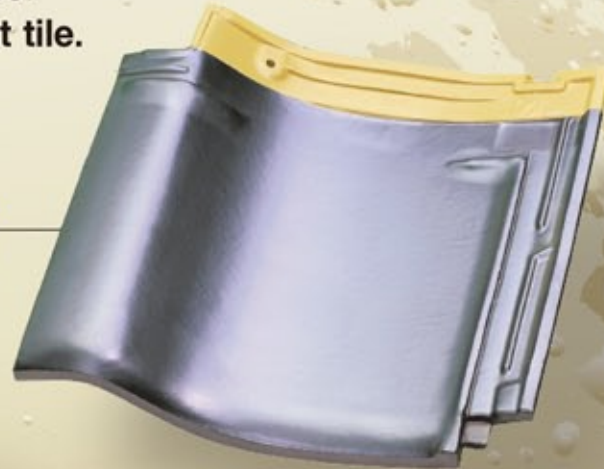
SHIBAO
Co., Ltd.
Sekishu Minakami

Rain, Wind, Snow, Earthquake and Human Disaster Resistant

Excellent coalescence and water resistant functions that perform even at lower slopes. The finest multifunctional disaster resistant tile.

Ultra 3S Tile SUPER A type

All the main functionality for a neat disaster resistant tile.



Ultra 3S Tile SUPER B type

The ultimate multifunctional disaster resistant tile.

Ultra 3S Tile Z type

The Ultra 3S Tile base concept in a simple disaster resistant tile for easy construction.



Strong! SHIBAO Roof Tiles

Wind tunnel with maximum wind speed of 50m/s

Stress tests are repeatedly conducted in order to improve the technology built into each tile.



Beautiful! SHIBAO Roof Tiles

Custom Made Elutriation Equipment

The fine and smooth texture of the tiles is accomplished by passing raw clay solution through a 0.5mm mesh to remove impurities.



The best quality low iron content white clay is baked at a temperature of more than 1200°C.



White SHIBAO Roof Tile Reddish brown Sample Tile

Some color variation may occur depending on the iron content.

Comparison of Sintering Temperatures for Roof Tiles

Sekishu Roof Tile	Sample Tile A	Sample Tile B
1200°C or more	1100°C~1150°C	970°C~1100°C

Conducted by Sekishu Tile Industry Association

Large white clay quarry



Minakami-chou, where the SHIBAO Roof Tiles headquarters are located, has some of the highest quality white clay deposits in the Sekishu area.

Top in the industry, with more than 100ha of white clay deposits, SHIBAO is able to produce high quality tiles well into the future.



Example of salt damaged roof.

Frost Damage Test

Sekishu Roof Tiles soaked in 15~20°C water for 24 hours, then exposed to about -20°C air for more than 8 hours.

No Cracking or Peeling

Conducted by Shimane Institute of Industrial Technology

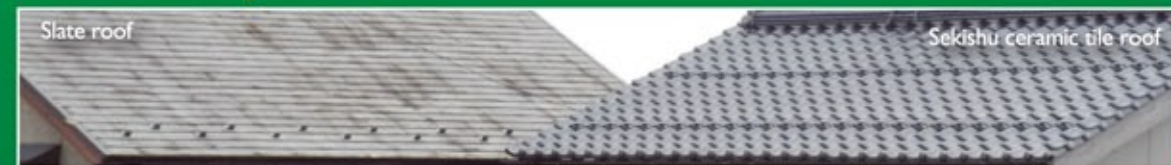
Salt Attack Test

AS/NZ4456 Standard Methods of Testing. Tiles were immersed in sodium sulfate aqueous solution then dried, cycled 40 times.



Conducted by Shimane Institute of Industrial Technology

Durability of Sekishu roof tiles that never fade



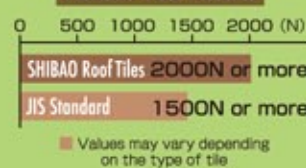
15 year old building
 Slate and ceramic tile roofs constructed at approximately the same time. The slate roof will need maintenance in about ten years.

Low Water Absorption Stone Hard



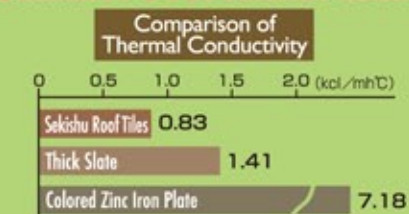
Conducted by Shimane Institute of Industrial Technology (JIS A-5208 Standard Methods of Testing) Japanese Industrial Standards (JIS) require water absorption rate of glaze tiles are regulated to 12% or less

Comparison of Flexure Test Results



Conducted by Shimane Institute of Industrial Technology (JIS A-5208 Standard Methods of Testing) Japanese Industrial Standards (JIS) require a modulus of rupture higher than 1500N

Low Thermal Conductivity Summer Cool Winter Warm



Conducted by Sekishu Tile Industry Association

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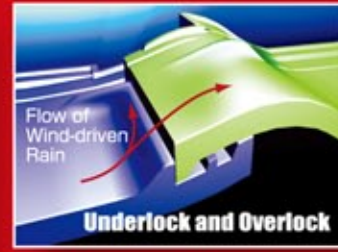
SHIBAO Roof Tiles are Sekishu Tiles.

Salt Damage, Frost Damage Resistant

Fits perfectly! Prevents Wind-driven Rain Penetration

POINT

Special Vertical and Horizontal Overlapping Structure
[Overlaps]
A&B type

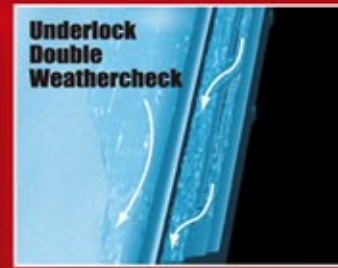


Perfect vertical and horizontal fit. Prevents slippage and blocks wind-driven rain.



POINT

Headlap and Underlock Weatherchecks
[Water Resistant Barriers]
A&B type

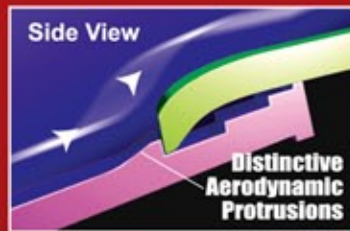


The headlap weatherchecks are three times as high as regular Japanese roof tiles, and the underlock weatherchecks guide water down the water course. Stops wind-driven rain.

POINT

Prevents Slippage, Falling and Scattering.

Unique design feature that turns wind uplift forces into downforces, the resultant pressure pushing down on the tiles.
Distinctive Aerodynamic Protrusions
A&B type



The 2000 Western Tottori Earthquake
Magnitude 7.3
Maximum Seismic Intensity Upper 6



POINT

Interlocking Safety Lugs
A&B type

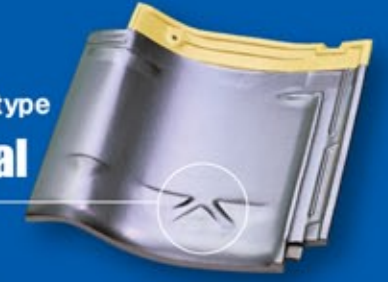


High Wind Resistant Earthquake and

Snow stopping mechanism on each tile keeps weight of snow on the roof distributed evenly. Also prevents snow falls, ice dams and accelerates thawing.

POINT

Ultra 3S Tile SUPER B type Multifunctional Protrusions
■ Not built into A and Z Type



Look at the Difference!

About **30cm** of snow cover Winter 2011, Western Tottori

One day later



Two adjacent houses photographed on the same day at the same time.

■ Roof tile color and type of snow might show different results. ■ Use of additional ringed snowstopper tiles advised.

Look at the Difference!

Two adjacent houses photographed on the same day at the same time.

About **70cm** of snow cover
A few days later

Winter 2010, Western Tottori



■ Roof tile color and type of snow might show different results. ■ Use of additional ringed snowstopper tiles advised.



Spreads out water flow and blocks wind-driven water.

The protrusions in the water course not only act as snowstoppers, but also block wind-driven water from creating back flow which results in roof leaks.



Safety on the Roof

The protrusions double as a safety mechanism, providing traction for those who need to traverse the roof.

Fits Perfectly on Any Roof

For Roof Reform!

Variable Size Series

スリム
Slim

W250mm (Standard Roof-25mm)



Ultra 3S Tile Super A type-Slim



Ultra 3S Tile Super B type-Slim



Ultra 3S Tile Z type-Slim

ワイド
Wide

W290mm (Standard Roof+15mm)



Ultra 3S Tile Super B type-Wide



Ultra 3S Tile Z type-Wide

ロング
Long

L260mm (Standard Roof+35mm)



Ultra 3S Tile Super B type-Long



Ultra 3S Tile Z type-Long

■ Long Type also available in Slim and Wide sizes.



A safe roof with no tire!

Onigawara is a symbol that protects the house. By order only.



Japanese roof tiles



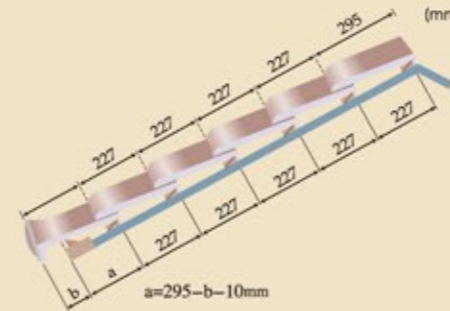
Product Specifications of the pantile

- Ultra 3S Tile Super
- Ultra 3S Tile Ztype

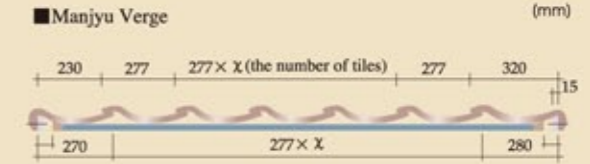
Actual size	Working size	Number of tile
Total length 295 mm	Length 225 mm	16pcs./㎡
Total width 315 mm	Width 275 mm	53pcs./3.3㎡
		±4mm

Layout Size

Run direction



Ridge direction

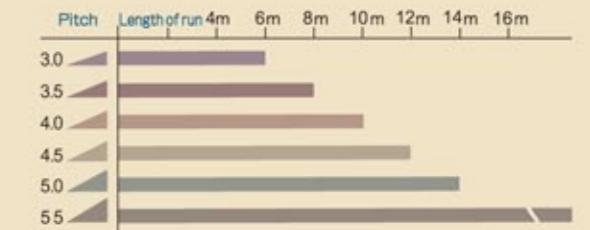
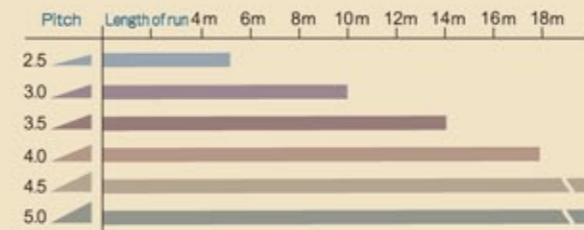


Standard Roof Pitch and Run

Ultra 3S Tile Super Btype

Ultra 3S Tile Super Atype

Ultra 3S Tile Ztype



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- For low slopes, eave tiles with the same gradient as the pantiles is advised.
- For low slopes, sealing the nailholes of the snowstoppers with caulking is advised.

In-house roof leak experiment



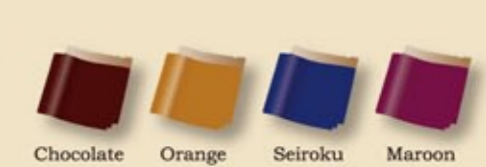
Color Choice

- Ultra 3S Tile Super
- Ultra 3S Tile Ztype



By order only

- Ultra 3S Tile Super



● The colors of the tiles may differ slightly from this printed pamphlet.

Characteristics of Ceramic Roof Tiles

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- For specific design requirements and for to adhere to building standards and practices, consulting a specialized contractor is advised.

Cool Japan

Japanese roof tiles have a more than 1400 year history.

There is no other roofing material that has been protecting Japanese houses for so long.

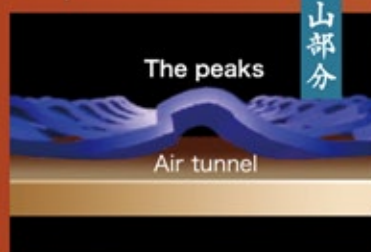
This is because Japanese roof tiles are the most suitable roofing material for Japan's climate.



Both the peaks and the valleys of Japanese roof tiles play an important role.



The valleys, or water course, efficiently channel water down the roof.



The peaks, or overlacks, form an air tunnel underneath the roof surface, improving the breathability and thermal resistance of the roof, adding years to the house.

Superior point of the Japanese roof tiles

- Water resistance
- Fire resistance
- Durability
- Breathability
- Thermal insulation properties
- Sound insulation properties
- Aesthetic appearance
- Economic efficiency

SHIBAO
Co., Ltd.
 Sekishu Minakami

Shibao Co., Ltd.
 658-1 Shirotsuki, Minakami-cho, Ohda-shi, Shimane 694-0303, Japan
 TEL : +81-854-89-0201 FAX : +81-854-89-0276

●Shimane ●Fukuoka ●Hiroshima

<http://www.shibao.co.jp/> ✉ info@shibao.co.jp

21世紀の屋根を創造する。
シバオ
 株式会社
 石州水上

本社 / 〒694-0303 島根県大田市水上町白環 6 5 8-1 TEL 0854-89-0201 FAX 0854-89-0276
 九州営業所 / 〒820-0607 福岡県嘉穂郡桂川町大字土師 3461-4 TEL 0948-65-3603 FAX 0948-65-3914
 店舗-ビストロ / 〒731-1526 広島県山県郡北広島町本地 6 0 5-1 TEL 0826-73-0587 FAX 0826-73-0588

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