
120 Years
TEJAS BORJA
Since 1899


120 Years

More than a century around tiles

After 120 years of passionated dedication to the manufacture of clay roofing tiles, we have it clear: we love what we do as we love helping you to make your dreams and projects come true and be a part of so many homes of so many families around the world.

Five generations of passion and love for what we do is reflected in our products. For this reason, we invite you to continue joining us on this great journey being the engine of our inspiration for another 120 years.

Understand the past to build the future.

THE ® EVOLUTION

of the ceramic tile sector

Quality standards

Tejas Borja produces its roof tiles by the highest levels of manufacturing standards, implementing quality systems that exceed the requirements of different regulations.

Borja EXTREM

An exclusive of Tejas Borja, a roller kiln manufacturing process.
P. 6

Borja TECH

Plaster moulds and H-cassette production.
P. 8

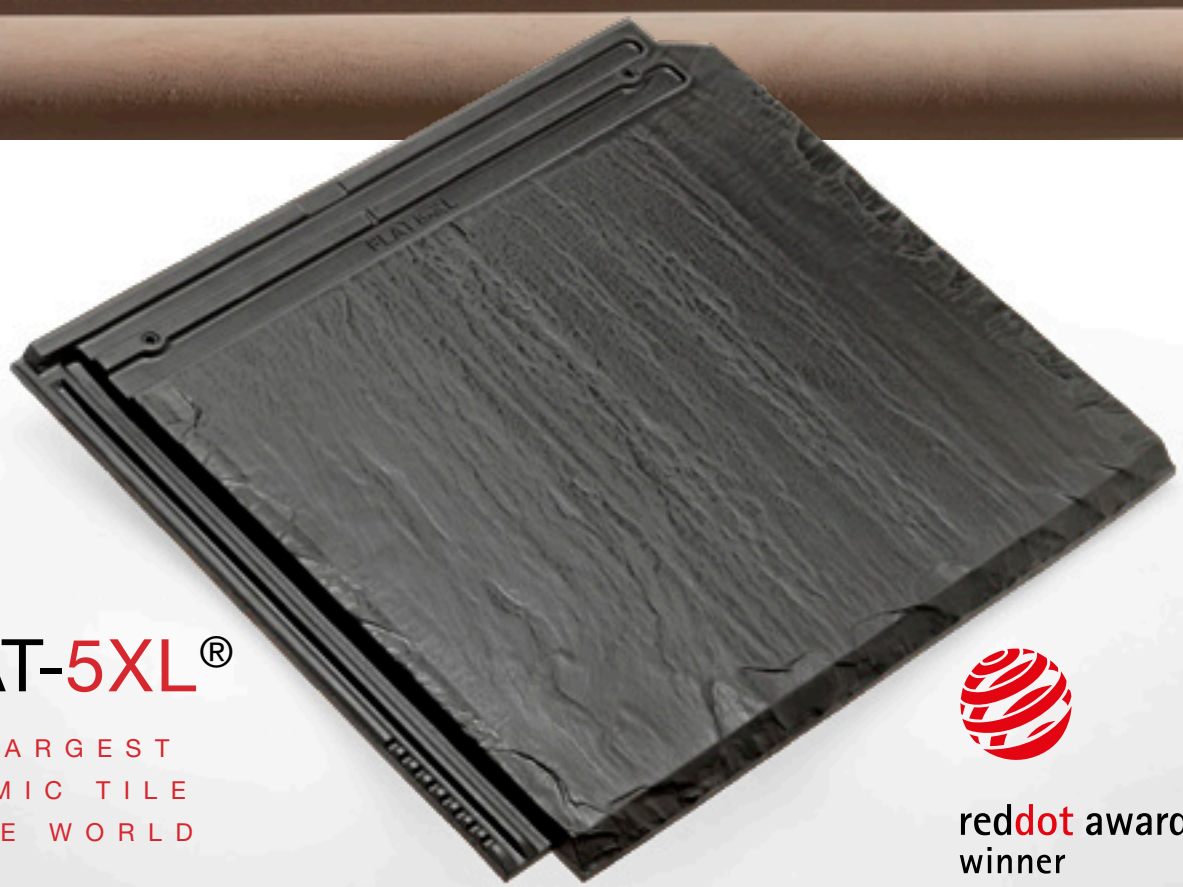
Borja CLASS

Manufacturing using high-quality, very fine, red sintered clay.
P. 10

Borja BLANC

Selection of special white clays. Ideal for the Mediterranean climate.
P. 11

Borja EXTREM



FLAT-5XL®

THE LARGEST
CERAMIC TILE
IN THE WORLD

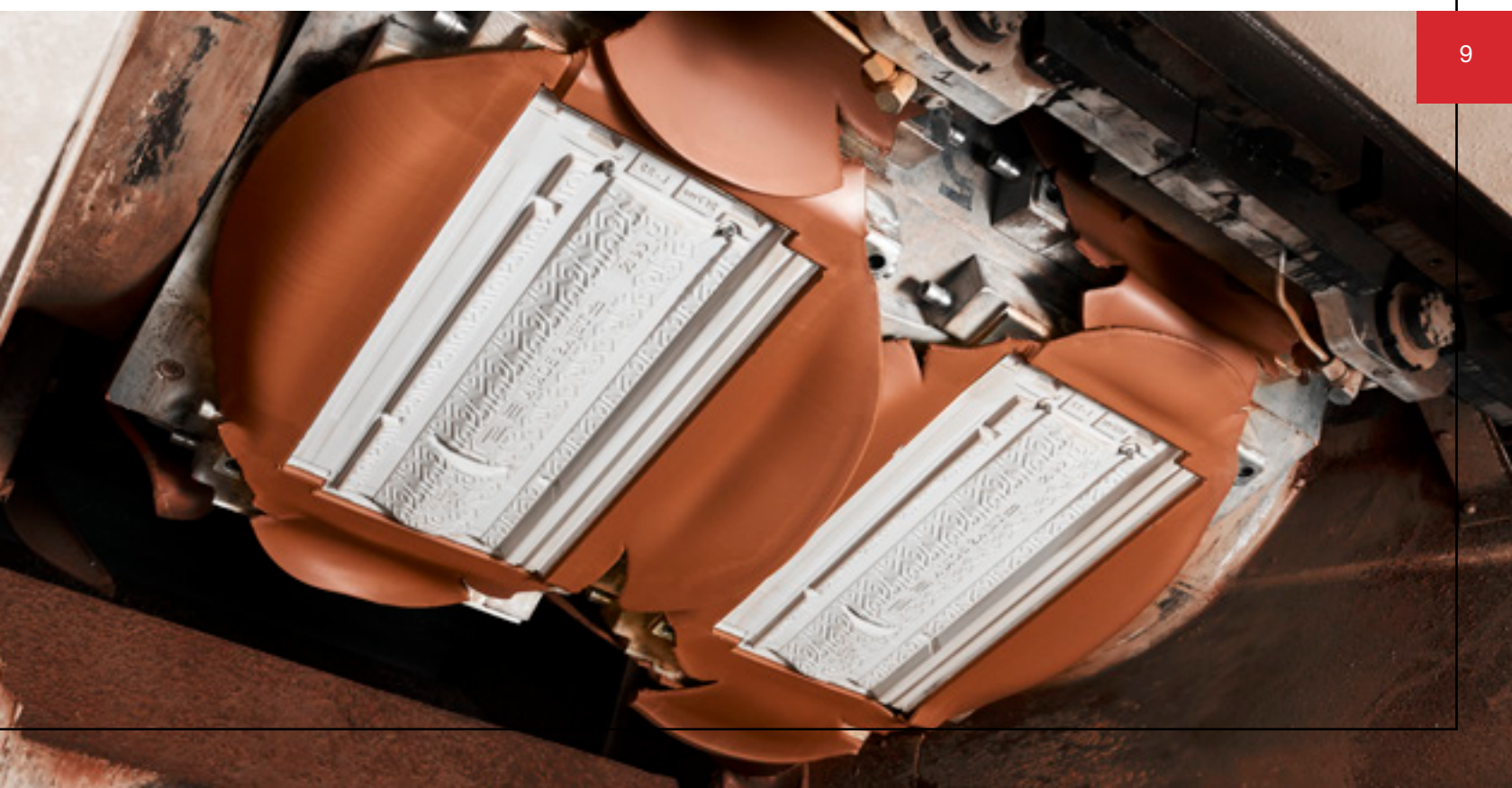
reddot award 2019
winner

The manufacturing process in a roller kiln combined with ceramic clays of very low water absorption, less than 3%, provide our tiles with a perfect flatness, in addition to the greater resistance to flexion.

BorjaTECH

FLAT-10 Tech TECHNICA-10 TB-10 Tech

The manufacturing process of Tejas Borja, with plaster molds and H cassettes, confers to our products a very perfect and detailed definition with greater clay compaction, a very low absorption and extremely strong.



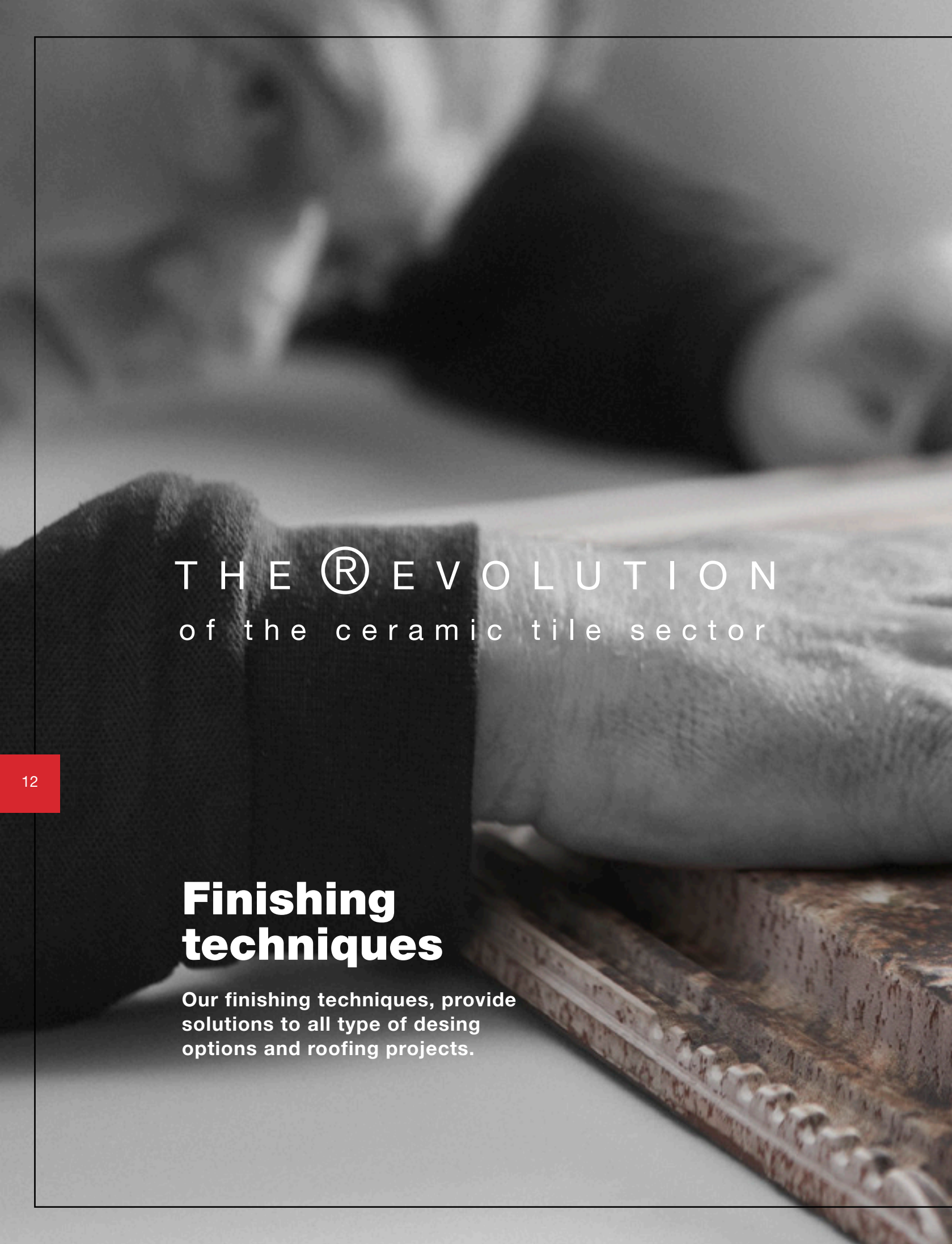
Borja CLASS

Roof tiles made using high-quality, very fine, red sintered clay.

The result: clay roof tiles of low absorption rate and high strength.

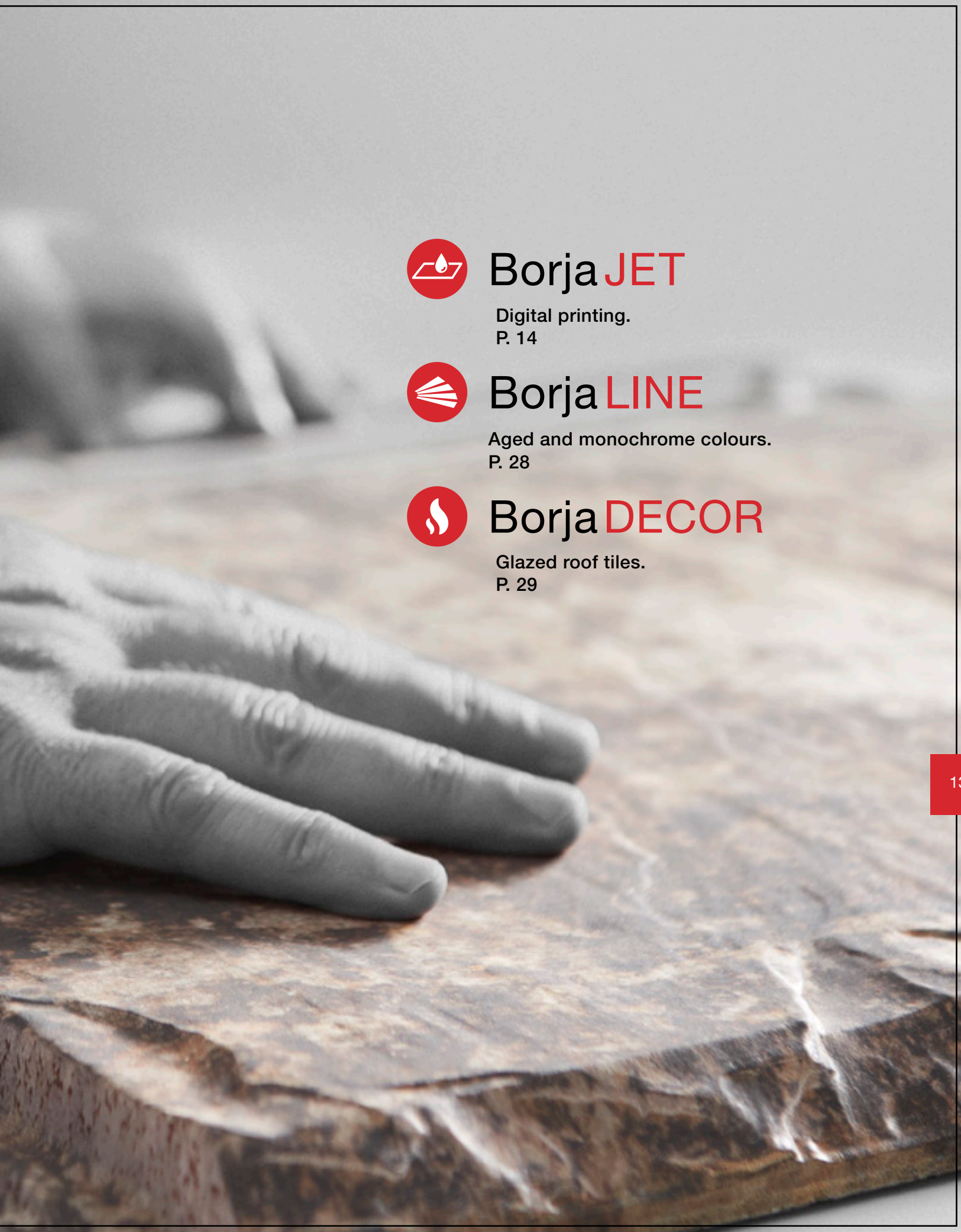
Borja BLANC

Ceramic roof tiles made with special white clays, which provide beautiful natural destonifications.



Finishing techniques

Our finishing techniques, provide solutions to all type of desing options and roofing projects.



Borja JET

Digital printing.
P. 14

Borja LINE

Aged and monochrome colours.
P. 28

Borja DECOR

Glazed roof tiles.
P. 29

Borja JET

Digital printing

Innovative World
EXCLUSIVE
from Tejas Borja

Inkjet digital printing technology applied in roof tiles manufacturing, makes possible the fusion of the richness of natural materials with the technical properties of ceramic tiles.

We are inspired by the charm of nature to merge its essence with the most advanced inkjet technology, obtaining unique finishes in the market.

BorjaJET

Five generations ago we began a long trip around the world. During all these years we visited incredible places and were where nobody had arrived in search of the pure essence of the nature.We knew incredible people and wonderful places, magic, with soul. We learnt where sensitivity it's born and what makes us tremble with our emotions.

reddot award 2019
winner

Ceramic
SLATE

Ceramic
STONE

Ceramic
CEMENT

Ceramic
OXIDE

Ceramic
COTTO

Ceramic
MARBLE

Ceramic
WOOD

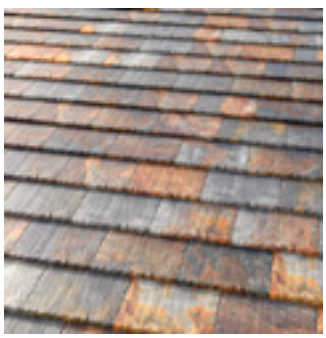
We found... the essence for our new collection.

Ceramic

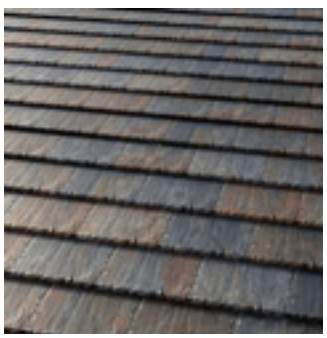
Slate

Beautiful textures and colours taken from the best quarries around the world.

Ceramic **Slate**



Nepal Orange



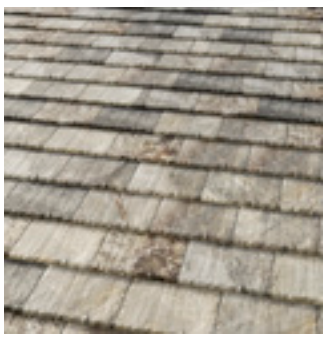
Paris Ocre

FLAT-5XL®	FLAT-10 Tech

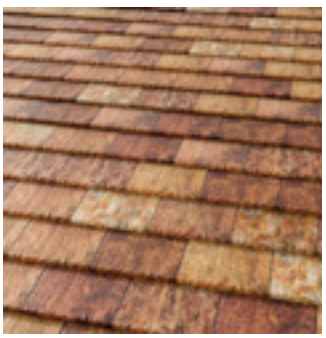
Ceramic Stone

From North America to Asia via Australia… a unique selection of the most beautiful stones in the world.

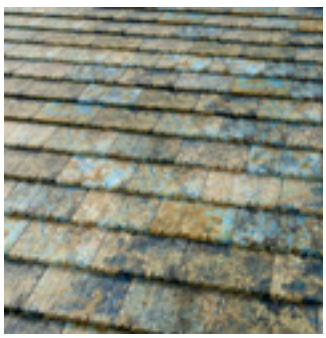
Ceramic **Stone**



Austin Grey



Denver Gold

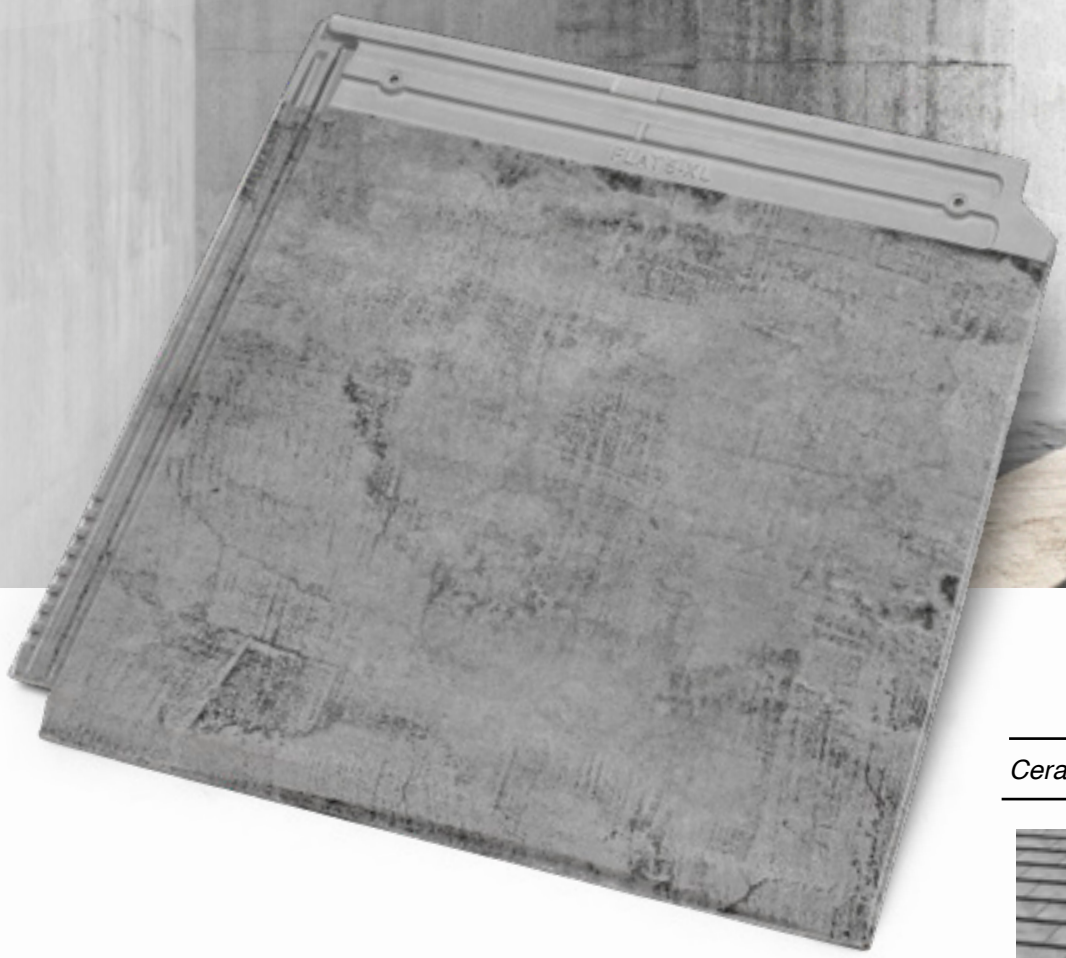


Denver Iris

FLAT-5XL®

Ceramic

Cement



Sidney Ghaphite

Our research into cement taught us more about the charm of the imperfect and the subtle and elegant strength its presence brings to a building.

FLAT-5XL®

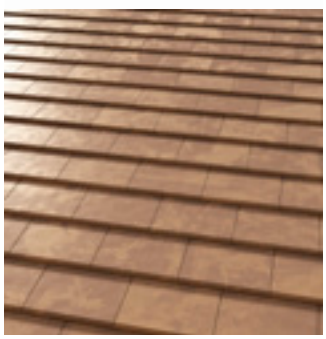
FLAT-10 Tech

Ceramic

Oxide

We discover metals full of history so we can tell you about it through our finishes.

Ceramic **Oxide**



Tokyo Copper

FLAT-5XL®	FLAT-10 Tech

Ceramic

Cotto

The soul of our products is baked clay, which had made us unique during more than… “A Century between Tiles”.

Ceramic **Cotto**

Ibiza Pink

FLAT-5XL®

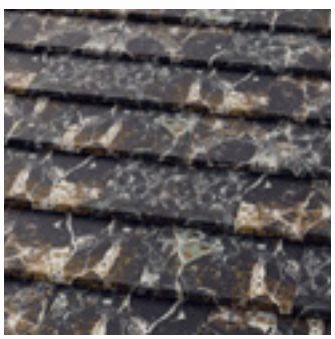
FLAT-10 Tech

Ceramic

Marble

We synthesize the character of this material in search of its essence, present throughout the history of art.

Ceramic **Marble**



Roma Dark

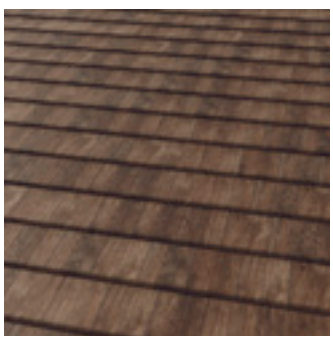
FLAT-5XL®

Ceramic

Wood

We capture the sensation given by the noblest woods to preserve their natural beauty, created by the passing of time.

Ceramic **Wood**



Toronto Oak

FLAT-10 Tech

Ceramic SLATE

Nepal Orange

Paris Ocre

Ceramic STONE

Austin Grey

Denver Gold

Denver Iris

Ceramic CEMENT

Sidney Ghaphite

Ceramic OXIDE

Tokyo Copper

Ceramic COTTO

Ibiza Pink

Ceramic MARBLE

Roma Dark

Ceramic WOOD

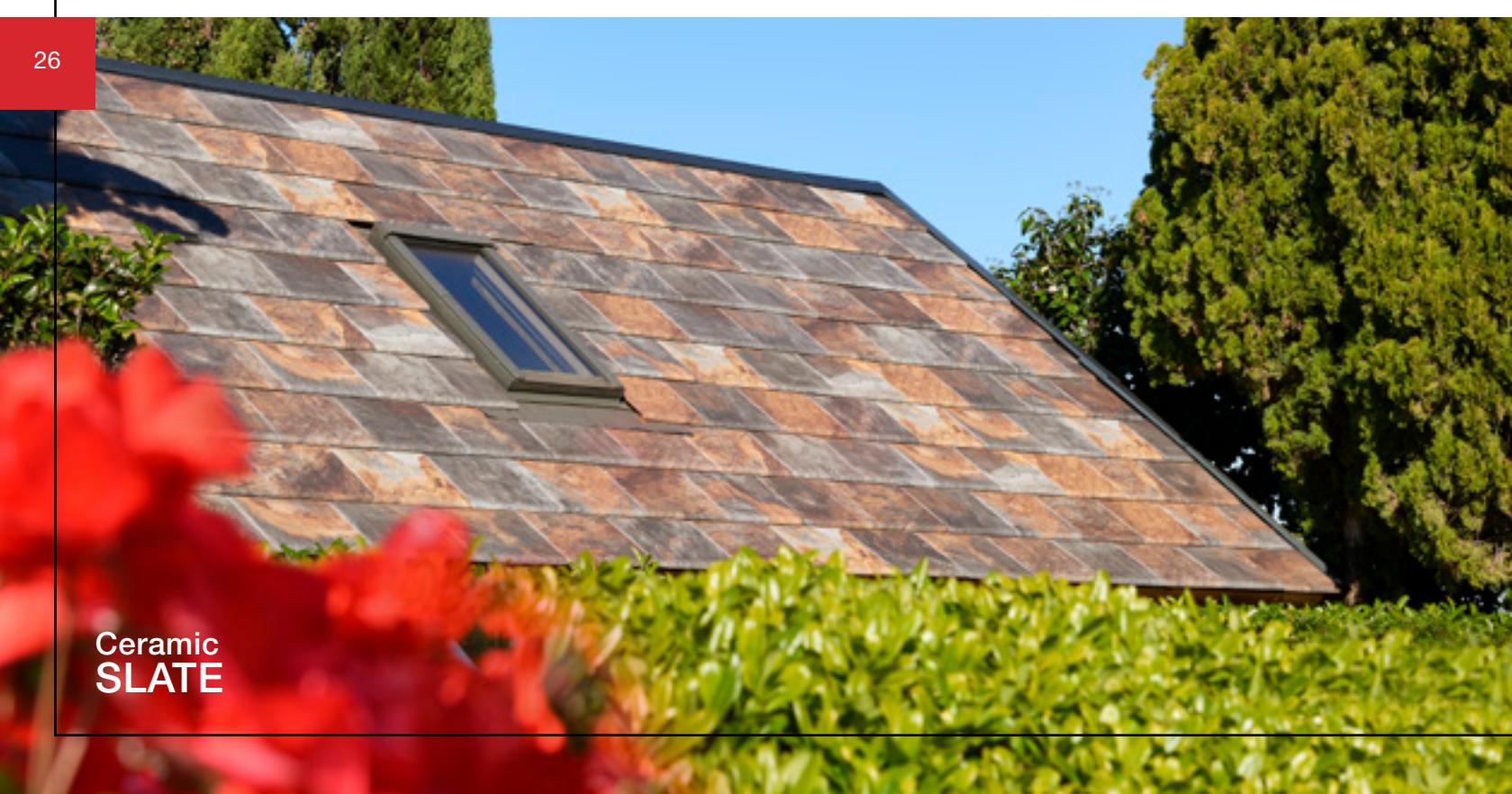
Toronto Oak

NOTE: Ceramic Slate and Ceramic Stone are textured surface models.

FLAT-10 Tech		FLAT-5XL®	

BorjaJET

Using this technological revolution we are able to make roof tiles with a wide variety of finishes such as slates, woods, stones, marbles and oxides. The result is a truly original product.




Ceramic
CEMENT


Ceramic
MARBLE


Ceramic
WOOD


Ceramic
OXIDE

Borja LINE

Analog technology based on the application of engobes and ceramic deposits.

Unique aged and monochrome colours.

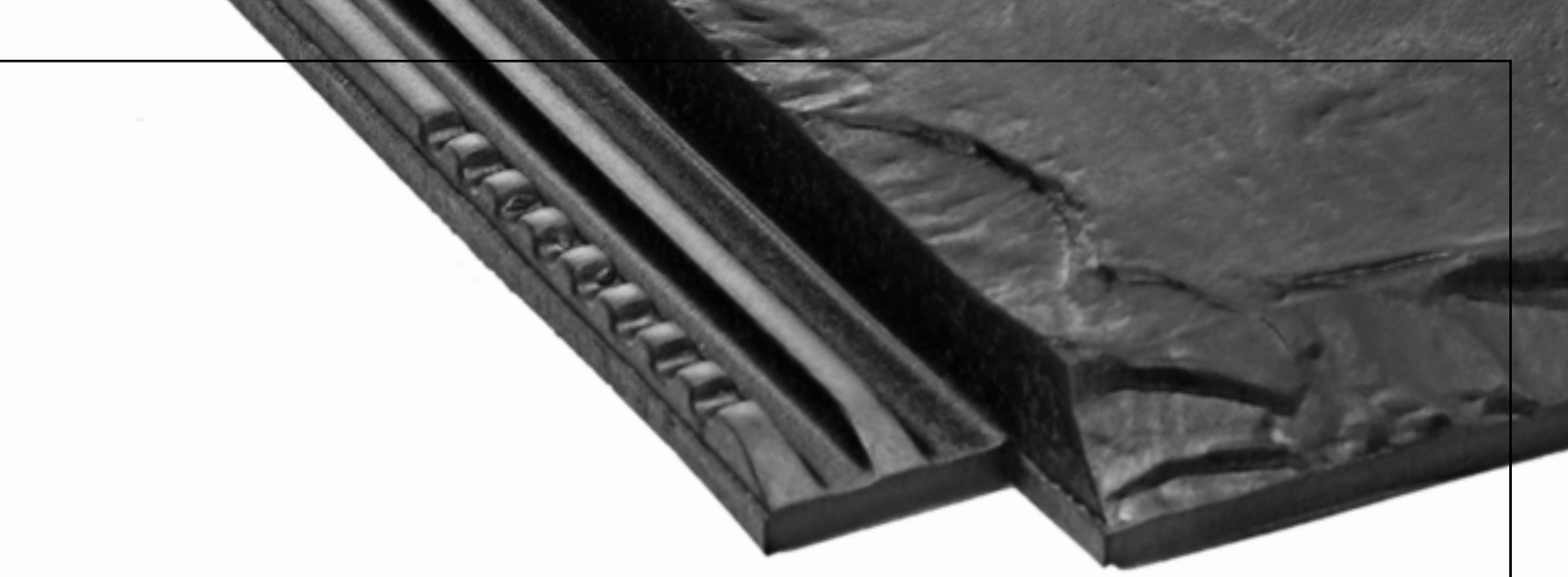
Borja DECOR

High gloss glazed roof tiles which prevent premature aging, delaying moss formation.

FORMAT INDEX

The roof tiles

FLAT ROOF TILES



FLAT Roof Tiles

FLAT-5XL®

Another example of the innovation and technological development in ceramic roof tiles. The largest ceramic tile in the world.

P. 34

FLAT-10 Tech

A new generation of flat tiles now lighter and with greater definition. Suitable for roofs and façades.

P. 38

TECHNICA-10

Innovative flat tile in a Marseille style. Safer and technologically up-to-date. The most versatile format on the market. Ideal for all kinds of projects.

P. 42

ALICANTINA-12

Our classic and versatile flat tile. Flat profile with two soft grooves manufactured along three generations by Tejas Borja.

P. 46

The FLAT-5XL® is another example of the innovation, development and improvement of Tejas Borja products.

FLAT-5XL®

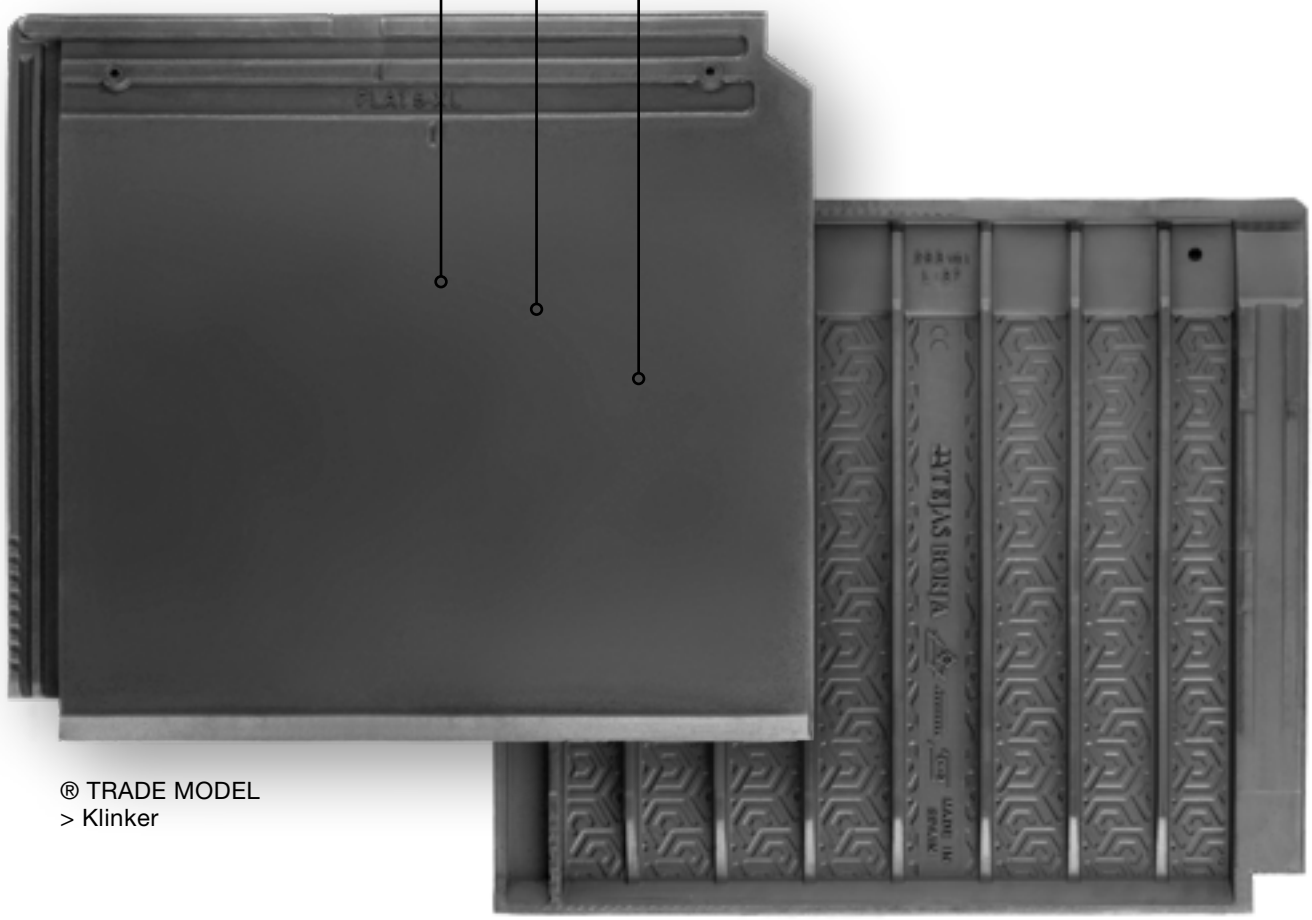
reddot award 2019
winner

The largest ceramic tile ever made

High performance in installation (5 units/sq.m.)

Wide range of finishes

(BorjaJET exclusive)



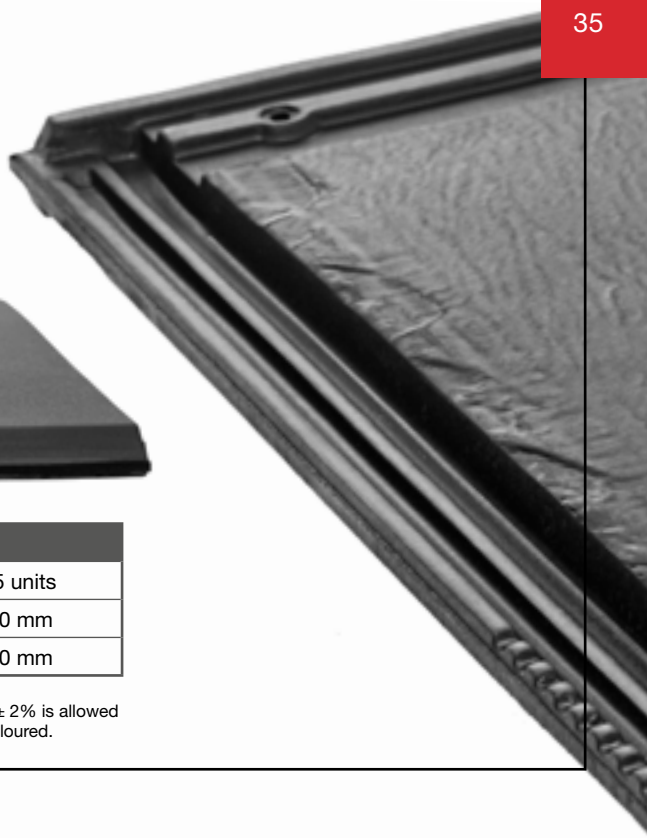
® TRADE MODEL
> Klinker

Maximum Surface Flatness

Minimum Slope 35%

Longitudinal Overlap 50 mm

Flexural Strength



Complies
D.3 RP34.02
Mountain climate

Characteristics	
Width	510 mm
Length	457 mm
Weight	6,55 kg/tile

Installation	
Tiles /sq. m.	5,5 units
Minimum batten spacing	340 mm
Maximum batten spacing	390 mm

Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE-EN 1024. The back side of the roof tile will always be natural clay coloured.

FLAT-5XL®

FLAT-5XL® - Leon

FLAT-5XL®

THE LARGEST
CERAMIC TILE
IN THE WORLD

FLAT-5XL® PLAIN COLOUR

Leon

Available in
exclusive finishes
(P.25)

BorjaJET

A new generation of flat tiles now
lighter and with greater definition.

FLAT-10 Tech

Perfect, deep fit

Large format - 10 units per sq. m.

Exclusive BorjaJET finishes

Lightweight

> Klinker

Maximum Surface Flatness

Minimum Slope 35%

Longitudinal Overlap 35 mm

Characteristics	
Width	285 mm
Length	475 mm
Weight	3,5 kg/tile

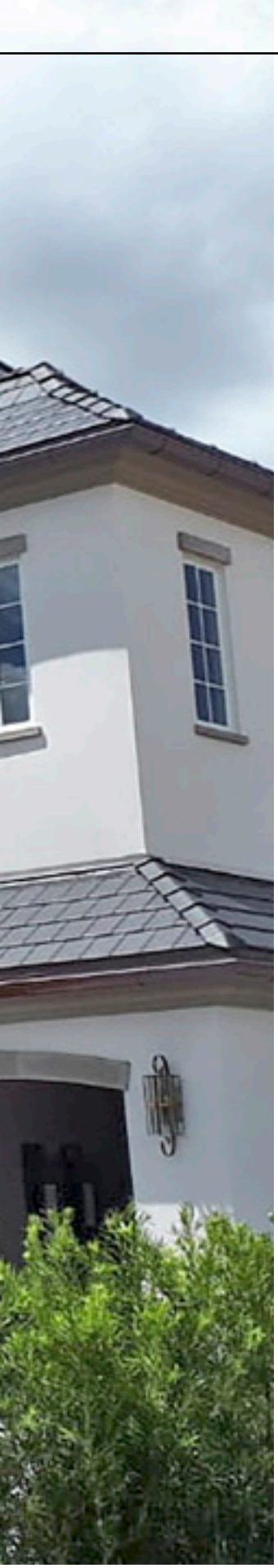
Installation	
Tiles /s.q. m.	9,9 units
Minimum batten spacing	365 mm
Maximum batten spacing	400 mm

Complies D.3 RP34.02 Mountain climate

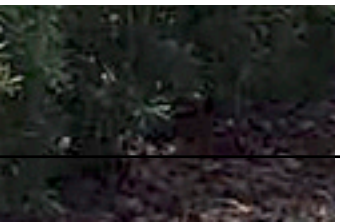
Perfectly watertight MobyDick II tested (CTMNC - Paris)

Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024. The certified characteristics for the NF Terracotta tiles are : Structural faults, the geometric characteristics , resistance to flexural strength , impermeability , frost resistance for all products made with red mixture. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com
The back side of the roof tile will always be natural clay coloured.

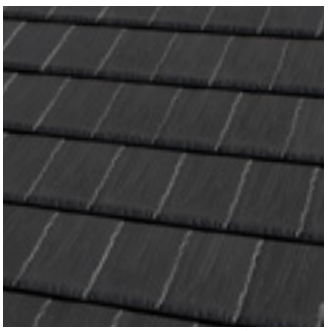
FLAT-10 Tech



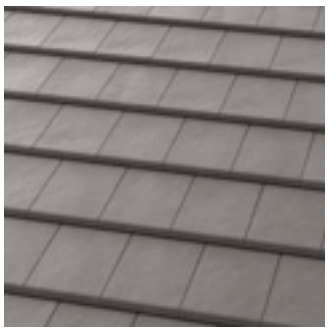
- Mid Grey



FLAT-10 Tech — PLAIN COLOUR



Leon



Mid Grey

Graphite

Natural Black

Chocolate

FLAT-10 Tech — NATURE

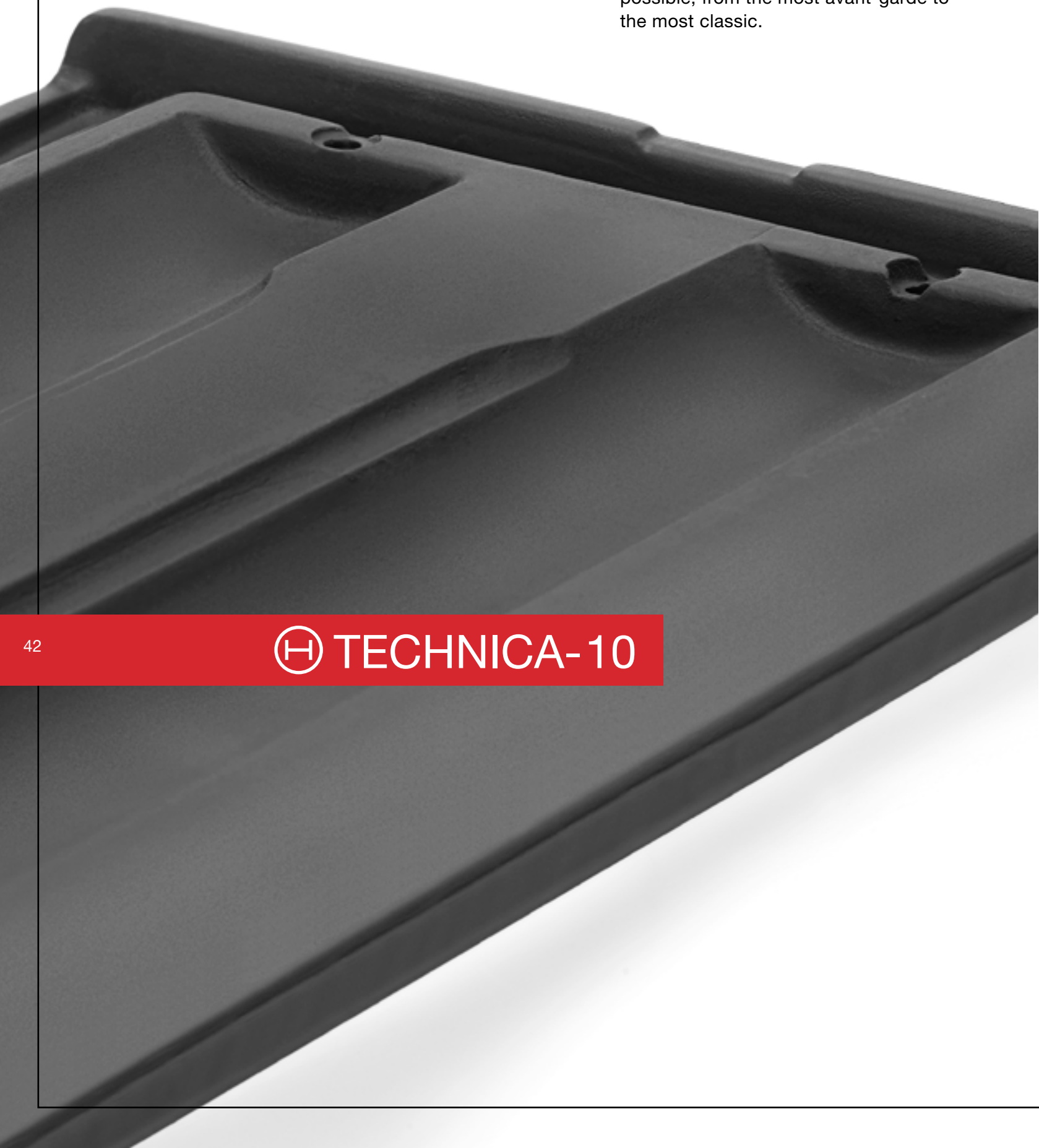
Roja

Moss Red

Available in exclusive finishes (P.25)

Borja JET

The most versatile roof tile format in the market. A combination of tradition and technology to make all kinds of projects possible, from the most avant-garde to the most classic.

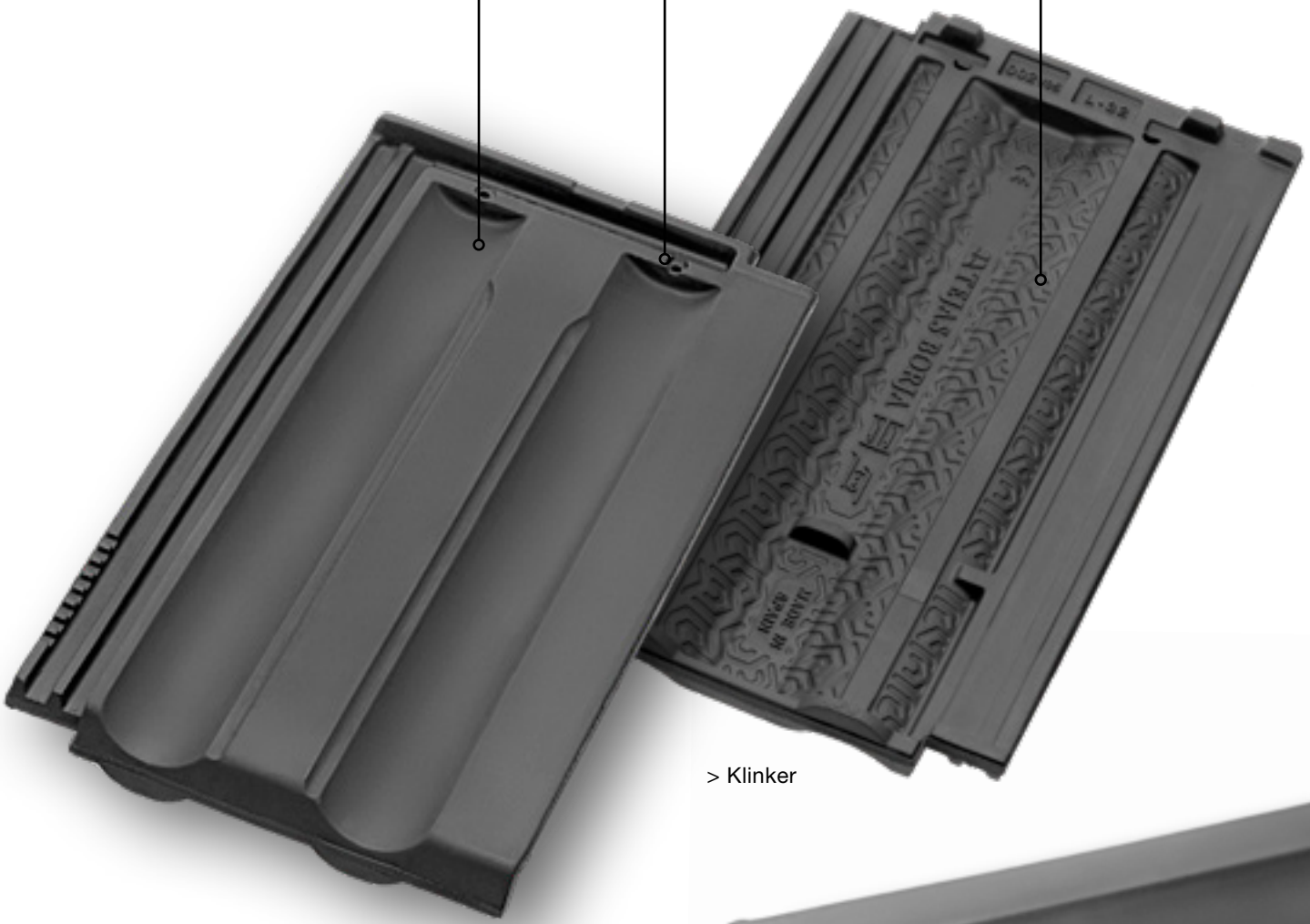


TECHNICA-10

Deep channel, extremely watertight

Great definition

Easy to install



> Klinker

Easy to install

Minimum Slope 35%

Longitudinal Overlap 40 mm

Characteristics	
Width	262 mm
Length	475 mm
Weight	3,3 kg/tile

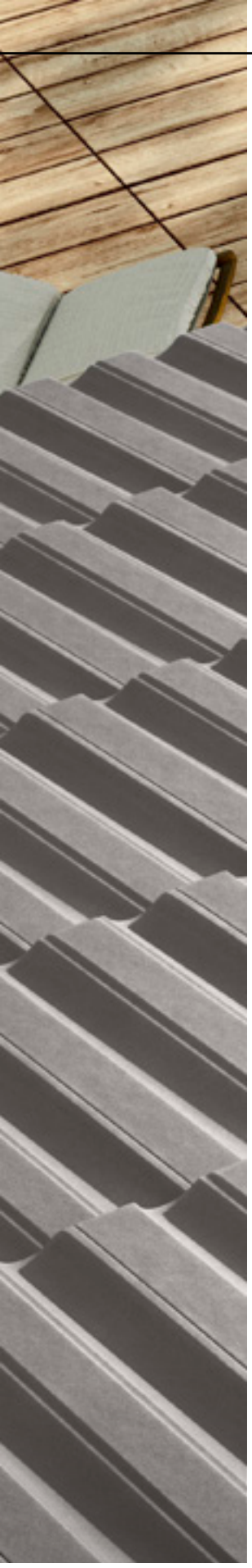
Installation	
Tiles /s.q. m.	10,7 units
Minimum batten spacing	370 mm
Maximum batten spacing	410 mm

Complies D.3 RP34.02 Mountain climate

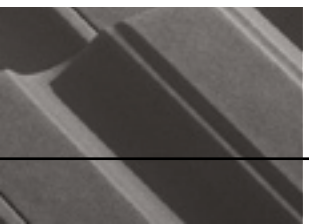
Perfectly watertight MobyDick II tested (CTMNC - Paris)

Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024. The certified characteristics for the NF Terracotta tiles are : Structural faults, the geometric characteristics , resistance to flexural strength , impermeability , frost resistance for all products made with red clay. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com
The back side of the roof tile will always be natural clay coloured.

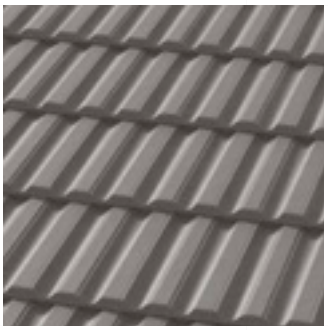
TECHNICA-10



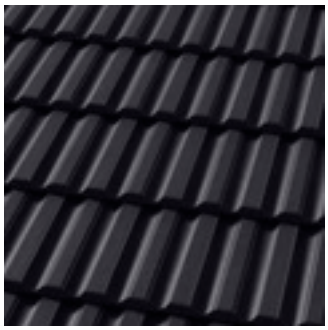
- Mid Grey



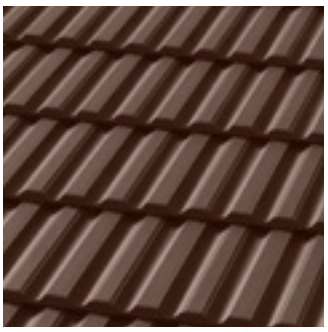
TECHNICA-10 PLAIN COLOUR



Mid Grey



Graphite



Chocolate

TECHNICA-10 NATURE

Red

Moss Red

Flat roof tile in a Marseille style, manufactured by Tejas Borja since XIX century. Ideal for renovation and roofing restoration.

ALICANTINA-12

Curved channels to allow water drainage

Ideal for roof renovation

Easy to install

Minimum Slope 35%

Characteristics	
Width	257 mm
Length	430 mm
Weight	3 kg/tile

Installation	
Tiles /s.q. m.	12,3 units
Batten spacing	370 mm

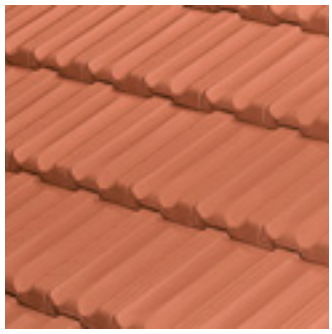
Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024.

ALICANTINA-12

Re-roofing with:
ALICANTINA-12

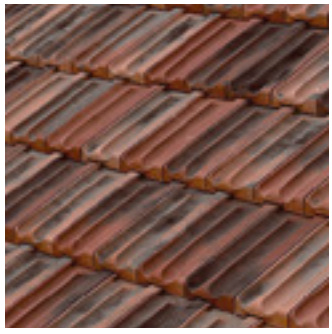
- Fosca

ALICANTINA-12 NATURE



Red

Fosca



Nortegna

Litoral

Accessories

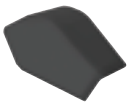
FLAT ROOF TILES

Angular Ridge
42 x 30,5 x 9,7 cm.
2,5 Units/lm/ 3,2 kg.
Max. Slope 62%-31.5°

Angular Hip Starter
42,2 x 30,5 x 10 cm.
2,83 kg.

Angular 3 Ways
45,2 x 29,3 x 10 cm.
4,37 kg.

Angular 4 Ways
46 x 41,5 x 16,5 cm.
6,50 Kg.



Straight End Cap
8,5 x 28,5 x 12,5 cm.
2,65 kg.

100° High Ridge
47,5 x 25,8 x 12,5 cm.
2,22 Units/lm/ 4,15 kg.
Max. Slope 100%-45°

100° High Hip Starter
37 x 25,8 x 12,5 cm.
3,30 kg.

100° High Straight
End Cap
27,5 x 28,5 x 7 cm.
2,15 kg.

100° Angular 3 Ways
40 x 45 x 22 cm.
5,15 kg.

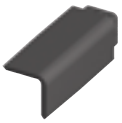
100° Angular 4 Ways
46,5 x 46,5 x 16 cm.
7,50 Kg.

100° Low Ridge
47,5 x 25 x 10,5 cm.
2,22 Units/lm/ 4,00 kg.
Max. Slope 60%-31°

100° Low Hip Starter
37 x 25 x 10,5 cm.
2,70 kg.

100° Low Straight
End Cap
27,5 x 28 x 7 cm.
2,1 kg.

Flat Straight
Edges (Left/Right)
40,4 x 12,4 x 12,4 / 2,6 cm.
3 Units/lm/ 2,50 kg.



Angular Edge
43 x 14,5 x 14,5 cm.
2,5 Units/lm/ 2,85 kg.
(on monopitch)

Interlocking Edges
(FLAT-10 Tech / TECHNICA-10)
left 47,5 x 15,5 x 8 cm. / 2,85 kg.
right 47,5 x 15,5 x 11,5 cm. / 3,15 kg.

Ventilation Cap
24,5 Øext - 22 Øint x 6 cm.
1,70 kg.

Chimney d.140
22,5 Øext - 20 Øint x 23,5 cm.
2,35 kg.

FLAT-5XL®

FLAT-5XL® Chimney Carrier
45,7 x 27,2 x 16 cm.
17 Øext - 13 Øint
3,75 kg.

Half FLAT-5XL®
Roof Tile
45,7 x 27,2 x 2,4 cm.
3,5 kg.

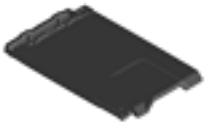
FLAT-5XL®
Ventilation
45,7 x 27,2 x 5 cm.
3,5 kg.

Interlocking Edges
FLAT-5XL®
left 47,5 x 15,5 x 8 cm. / 2,85 kg.
right 47,5 x 15,5 x 11,5 cm. / 3,15 kg.

FLAT-10 Tech

FLAT-10 Tech Chimney Carrier
47,5 x 28,5 x 10,5 cm.
18 Øext - 13,5 Øint
4,5 kg.

Half FLAT-10 Tech
Roof Tile
47,5 x 16,6 x 2,6 cm.
2 kg.

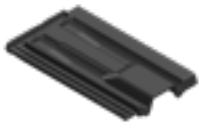


FLAT-10 Tech
Ventilation
47,5 x 28,5 x 3,7 cm.
3,5 kg.

TECHNICA-10

TECHNICA-10
Chimney Carrier
17 Øext - 13 Øint
47,3 x 26,2 x 10,5 cm.
3,7 kg.

Half Technica-10
Roof Tile
47,5 x 15,5 x 2,6 cm.
2 kg.



Technica-10
Ventilation
47,5 x 26,2 x 10,5 cm.
3,4 kg.

ALICANTINA-12

ALICANTINA-12
Chimney Carrier
43 x 25,7 x 12 / 15,5 Øext-13,5
Øint cm. - 4,00 Kg.

Half ALICANTINA-12
Roof Tile (Left/Right)
43 x 15 x 4,5 cm.
1,25 Units/lm/ 1,80 Kg.

ALICANTINA-12
Ventilation
43 x 25,7 x 10 cm.
4 Kg.

Chimney d.130
20,4 Øext-18 Øint x 23,5 cm.
2,15 Kg.

Dimensions in centimeters.
Check finishing colours for different accessories.

FLAT-10 Tech
Leon

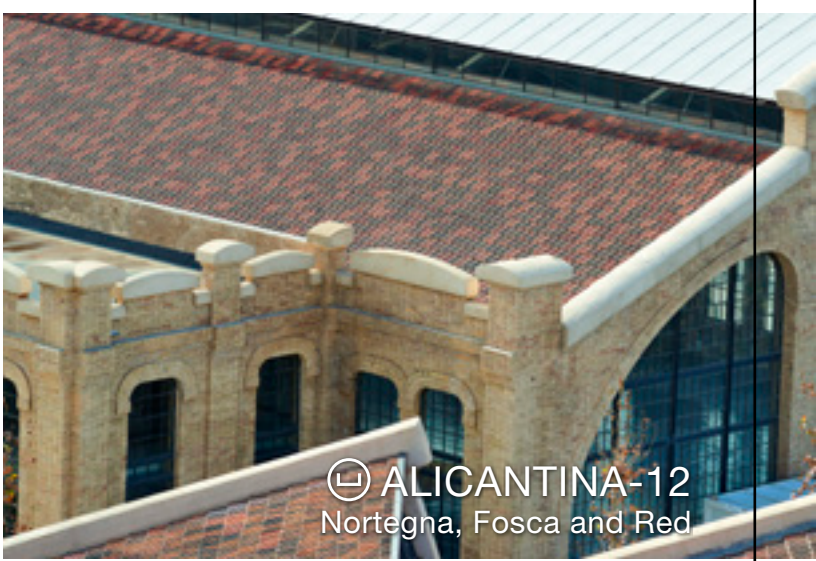
ALICANTINA-12
Red

Ideal for straight lines roofs design, the flat tiles are timeless.

FLAT-10 Tech
Mid Grey

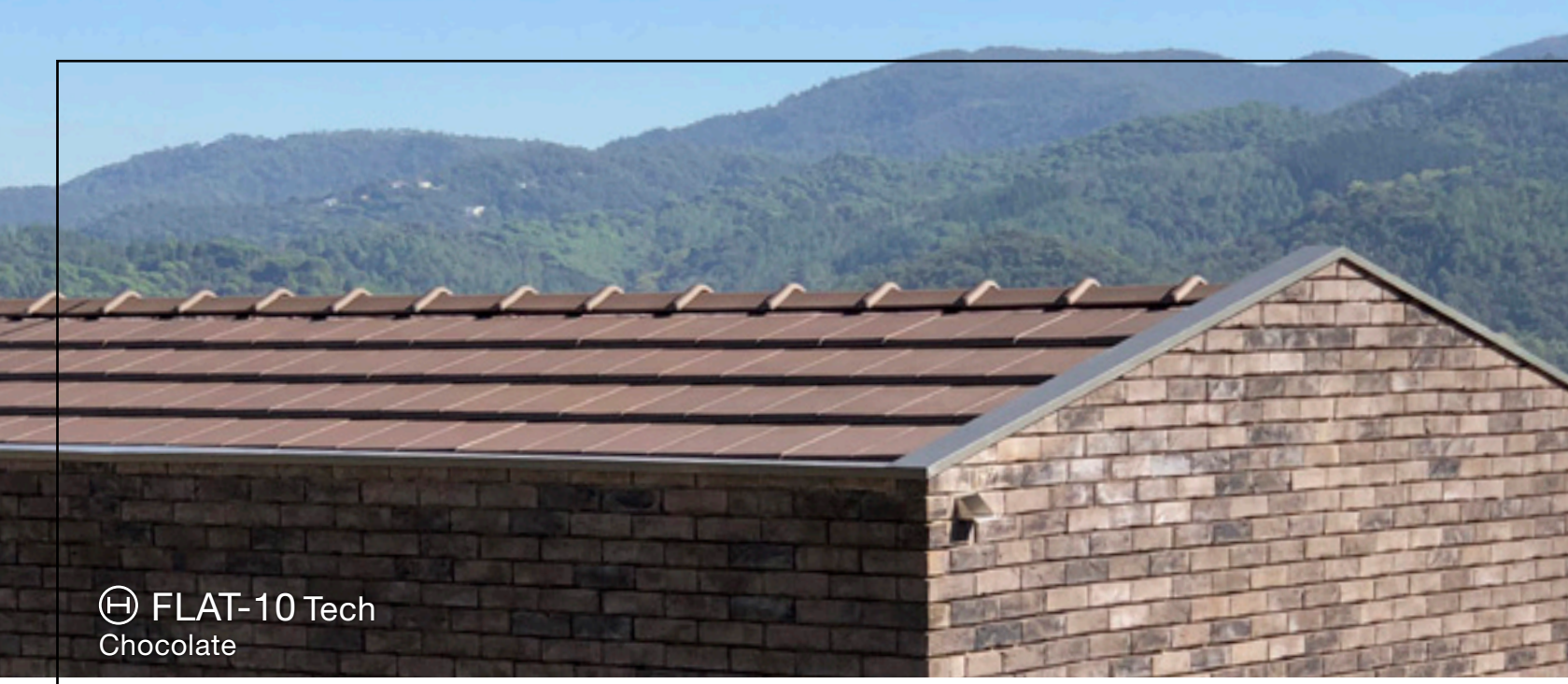
FLAT-10 Tech
Graphite

ALICANTINA-12
Litoral

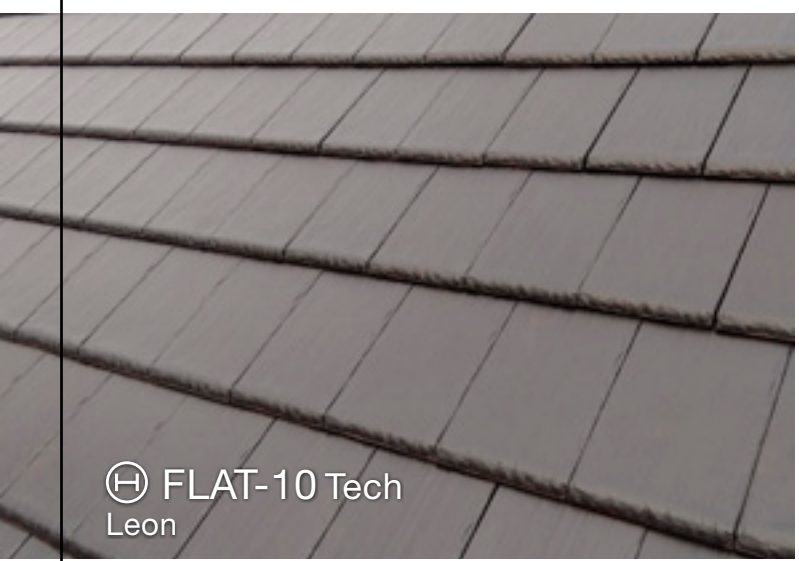


ALICANTINA-12
Nortegna, Fosca and Red

ALICANTINA-12
Nortegna, Fosca and Red

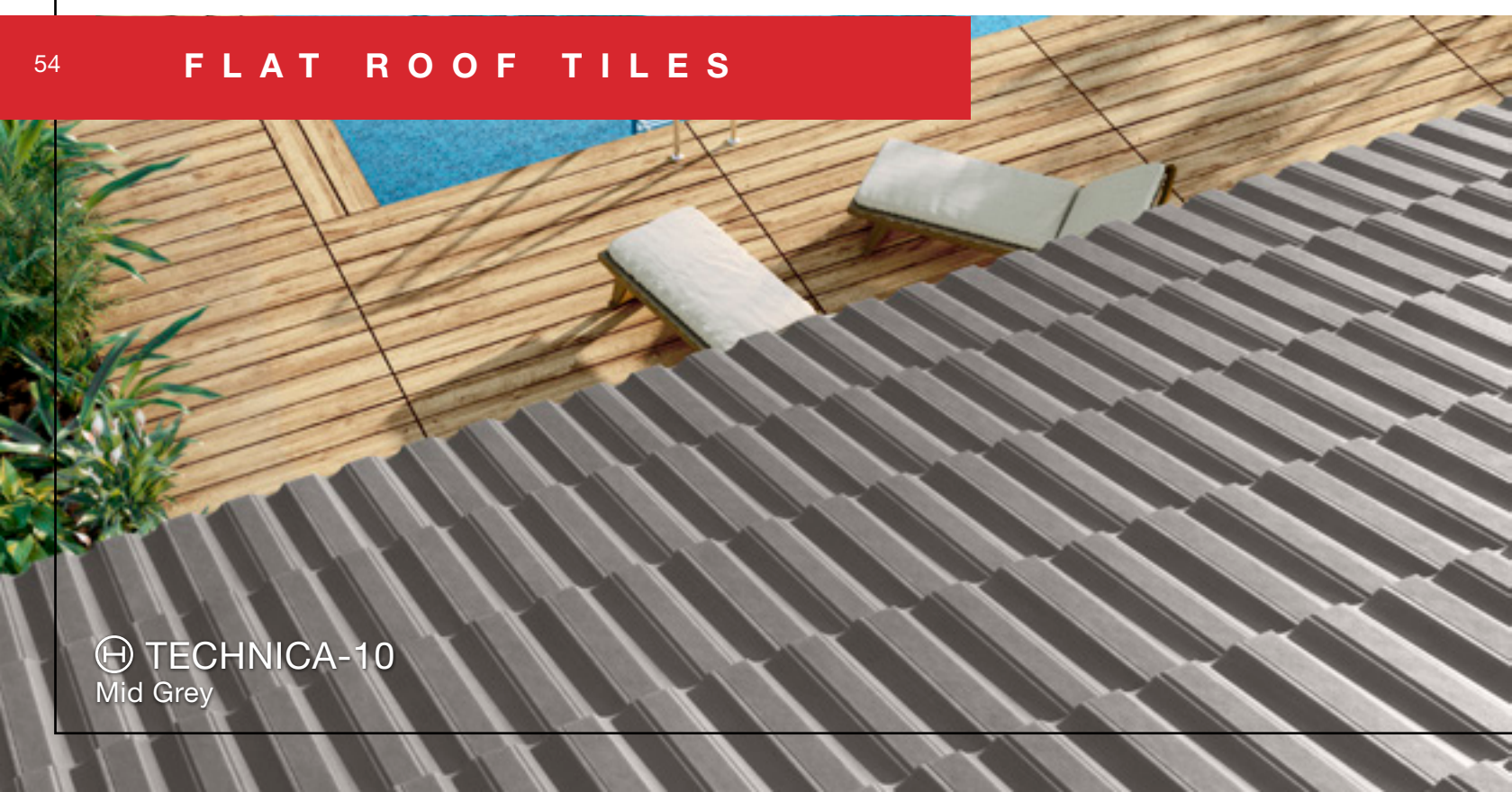


FLAT-10 Tech
Chocolate



FLAT-10 Tech
Leon

Due to its quality and design, the flat roof tiles are easily adaptable to any environment, surroundings and climates.



TECHNICA-10
Mid Grey

The aesthetics of flat roof tiles offer an elegant image with its own unique character.

TB-12® - Bidasoa®

S-INTERLOCKING Roof Tiles

TB-10 Tech

Technological evolution in the large size S-interlocking roof tile format. Its perfect definition and finishing simulate curved roof tiles aesthetics.

P. 58

TB-12®

Classic S-interlocking roof tiles small format. Thanks to its versatility and aesthetic, the S-Interlocking roof tile is usually the first option for arquitects and roofers.

P. 64

TB-4®

Trade model of S-interlocking roof tile adaptable to rounded areas with curved roof tile aesthetic.

P. 68

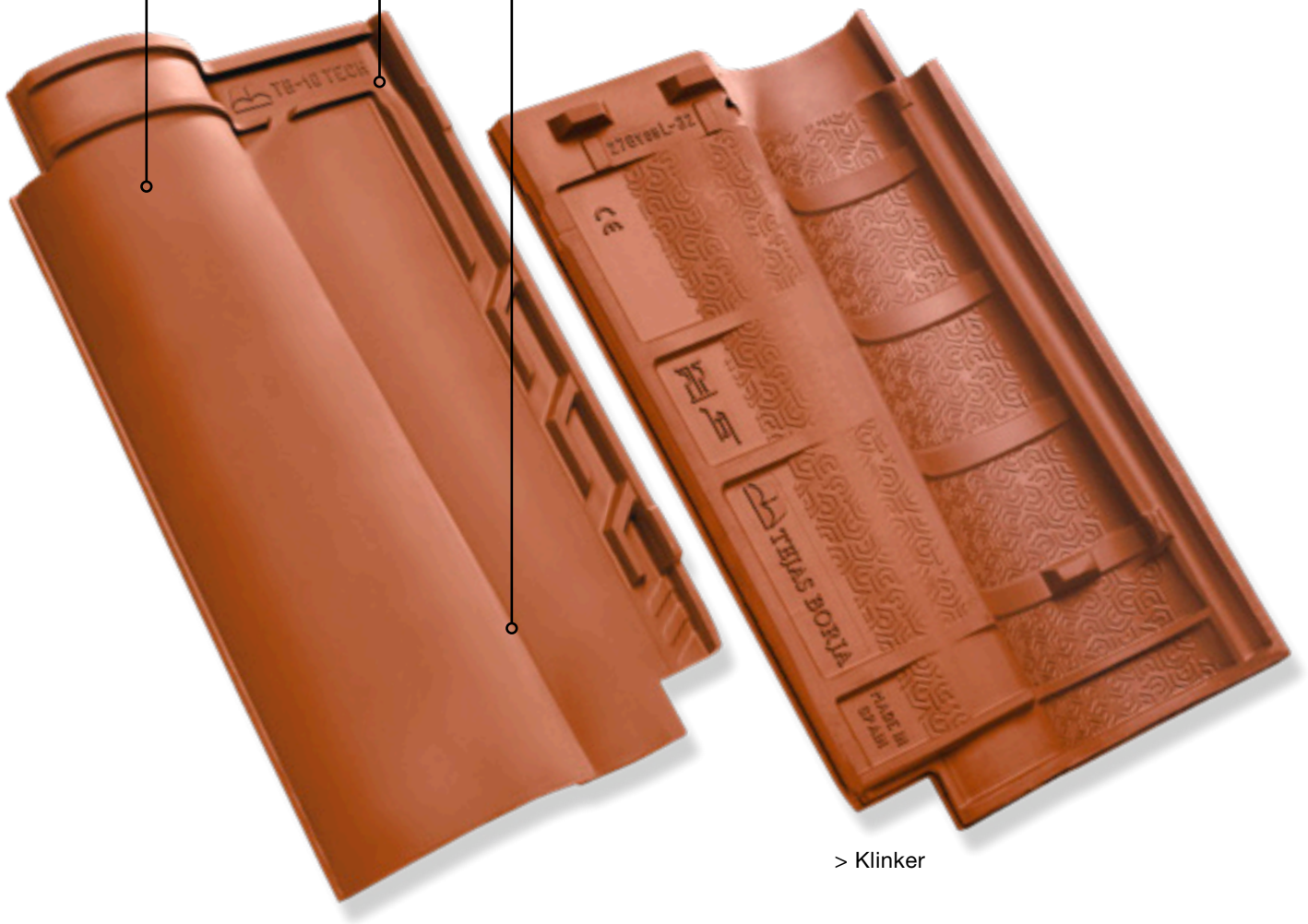
The evolution of the manufacturing procces using plaster molds and H cassettes, gives this S-interlocking roof tile unique qualities. The advantages of this tile are its variable batten spacings and its stalibilty due to level fixing with double nib support, giving the needed watertight.

TB-10 Tech

Adapts to various batten spacings

Longitudinal and transverse double fit

Curved tile aesthetic

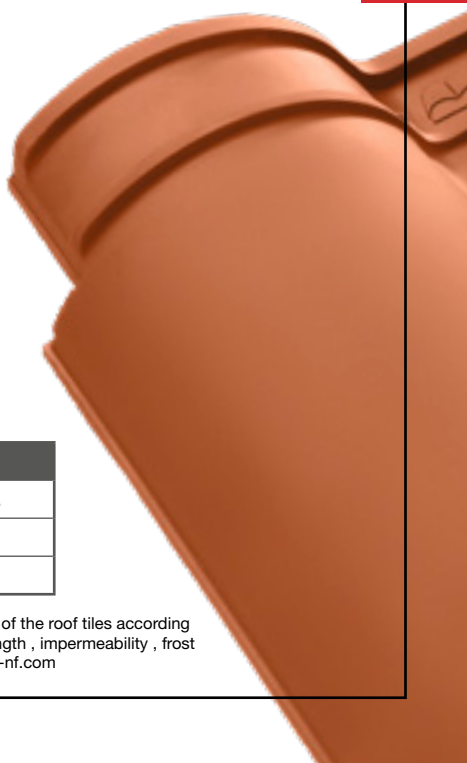


> Klinker

Easy to install

Minimum Slope 30%

Longitudinal Overlap 20 mm



Characteristics	
Width	282 mm
Length	475 mm
Weight	3,45 kg/tile

Installation	
Tiles /s.q. m.	10,4 units
Minimum batten spacing	390 mm
Maximum batten spacing	410 mm

Complies D.3 RP34.02 Mountain climate

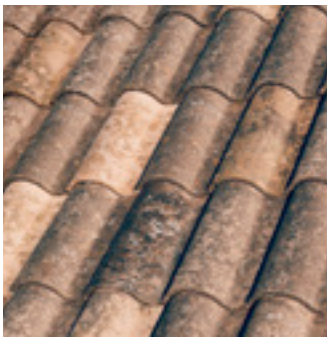
Perfectly watertight MobyDick II tested (CTMNC - Paris)

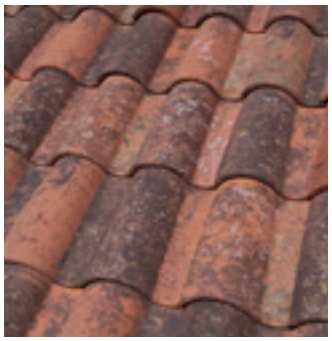
Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024. The certified characteristics for the NF Terracotta tiles are: Structural faults, the geometric characteristics , resistance to flexural strength , impermeability , frost resistance for all products made with red clay. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com

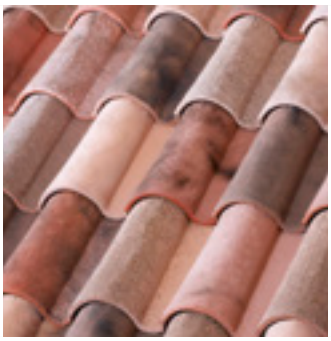
TB-10 Tech

TB-10 Tech - Centenaria® Ground

TB-10 Tech — CENTENARIA®


Entrepins


Irati


Ground

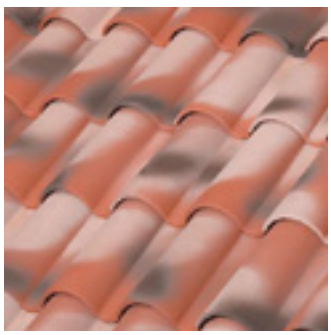

Sand

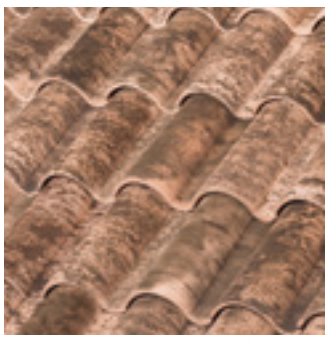
TB-10 Tech — NATURE

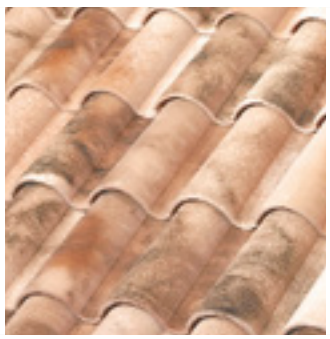

Red


Moss Red

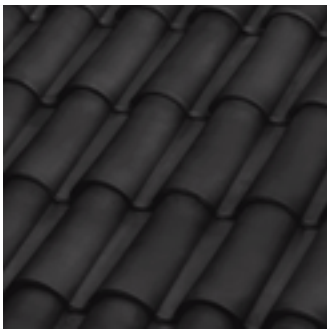

Fosca

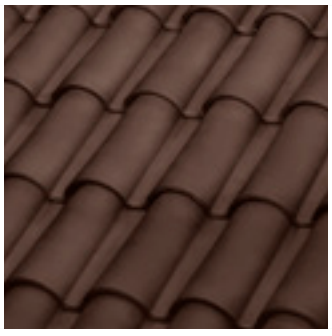

Manoir®


Edetania®


Lamalou®

TB-10 Tech — PLAIN COLOUR


Graphite


Chocolate

TB-10 Tech

Entrepins

THE ® EVOLUTION

of the ceramic tile sector

We take our inspiration from the Mediterranean,
transporting the charm of its landscapes to our tiles,
the perfect fusion of nature and **inkjet technology.**

Centenaria® Entrepins

A hundred years **in the blink of an eye**

An extremely safe roof tile with high resistance.
A small size S-interlocking roof tile format with
a wide range of finishes.

TB-12®

Double lateral overlapping and double Lengthinal overlapping

Safe and watertight fixing (pre-holed on a high point)

Level fixing with double nib support

Easy to install

Minimum Slope 30%

Characteristics	
Width	260 mm
Length	439 mm
Weight	3,15 kg/tile

Installation	
Tiles /s.q. m.	12,8 units
Batten spacing	370 mm

Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024. The certified characteristics for the NF Terracotta tiles are: Structural faults, the geometric characteristics , resistance to flexural strength , impermeability, frost resistance for all products made with red clay. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com

TB-12®

TB-12® - Bidasoa®

TB-12® CENTENARIA®

Ground

Mediterrania®

TB-12® PLAIN COLOUR

Graphite

TB-12® NATURE

Red

Aged Red

Fosca

Manoir®

Rosarena®

Lamalou®

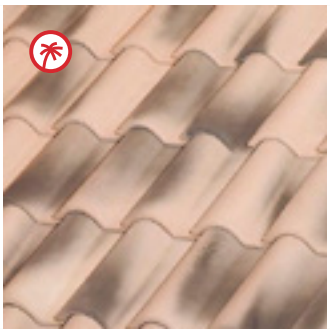
Bidasoa®

Castilla

Brown

Vilavella®

Jaspeada White



Aged White

Trade model of S-interlocking roof tile adaptable to rounded areas with curved roof tile aesthetic effect of 50 tiles per sq. m.

TB-4®

Double lateral overlapping and double Lengthinal overlapping

Safe and watertight fixing (pre-holed on a high point)

High resistance (back ribs reinforcement)

Level fixing with double nib support

Easy to install

Minimum Slope 30%

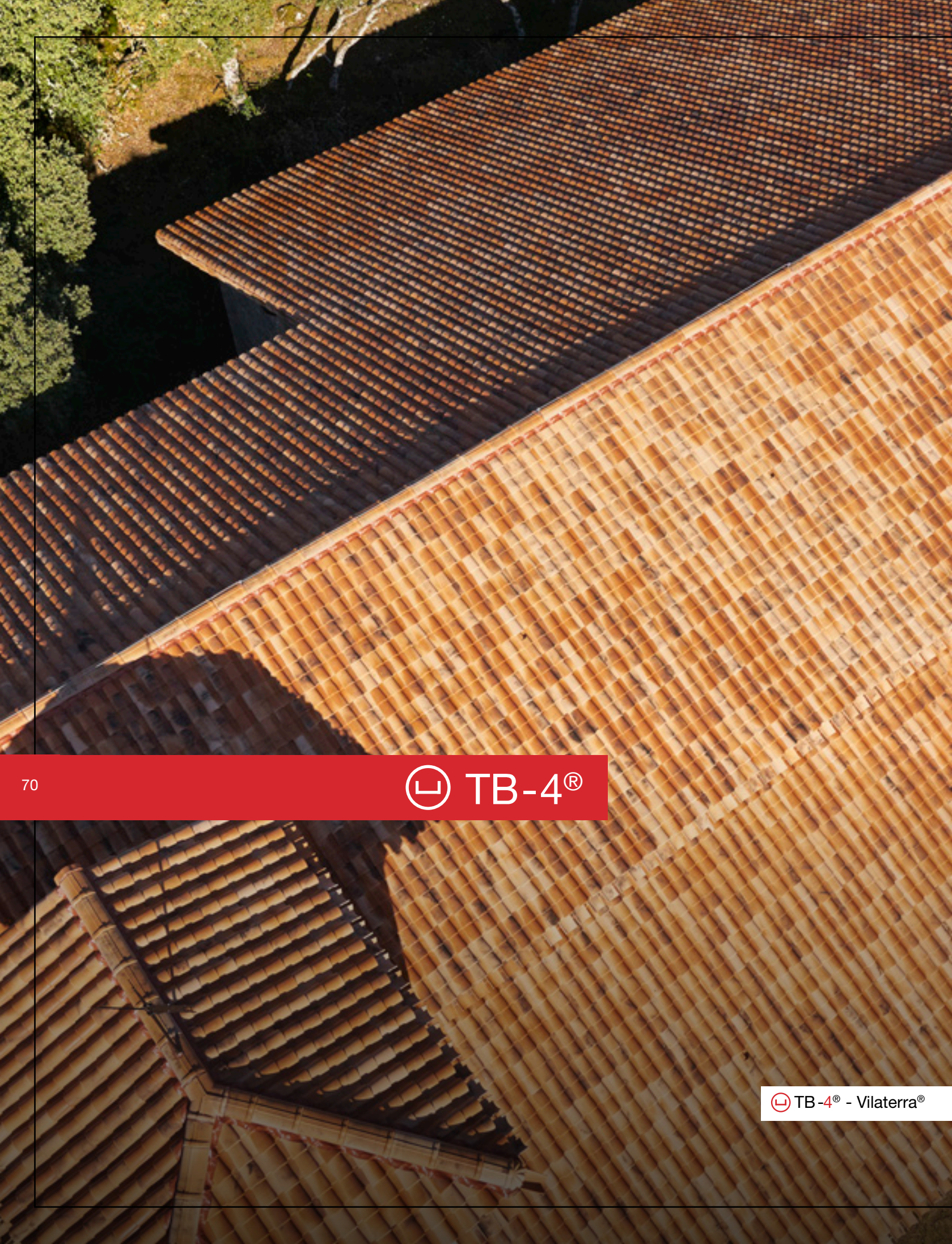
® TRADE MODEL

Characteristics	
Width	258 mm
Length	442 mm
Weight	3,4 kg/tile

Installation	
Tiles /s.q. m.	12,8 units
Batten spacing	370 mm

Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024.

TB-4®



TB-4® - Vilaterra®

Red

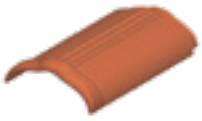
Fosca

Vilaterra®

TB-4® - Red

Accessories

S-INTERLOCKING ROOF TILES



Circular Ridge
43 x 23 x 9 cm.
2,5 Units/lm / 2,90 Kg.
Max. Slope 47%-25.10°

Circular Hip Starter
43 x 20 x 8,5 cm.
2,95 Kg.

Circular 3 Ways
37,5 x 23 x 9,5 cm.
4,20 Kg.

Circular 4 Ways
38,5 x 44,5 x 13,5 cm.
4,50 Kg.

Circular
Straight End Cap
7,5 x 24,5 x 27,9 cm.
2,40 Kg.

Circular
Straight End Cap
17,5 x 26,7 x 27 cm.
2,80 Kg.

Cover+ Ridge
44,5 x 28,5 x 10,5 cm.
2,5 Units/lm / 3,40 Kg.
Max. Slope 47%-25.10°

Cover+ Hip Starter
43,5 x 23 x 8,5 cm.
3,20 Kg.

Cover+3 Ways
32,5 x 42,5 x 14,5 cm.
3,10 Kg.

Cover+4 Ways
40,5 x 40,5 x 14 cm.
4,00 Kg.

Cover+
Straight End Cap
6,5 x 27 x 31 cm.
2,00 Kg.

Cover+
Curved End Cap
14,7 x 27,5 x 29,5 cm.
2,25 Kg.

Under Ridge
24 x 12,2 x 5,6 cm.
5 Units/lm (on monopitch)
0,80 Kg.

Straight Edge (Left/Right)
47 x 9 x 17 cm.
2,5 Units/lm 3,00 Kg.

Curved Edge (Left/Right)
47 x 24,5 x 16 cm.
2,5 Units/lm / 3,30 Kg.

Angular Edge
(on monopitch)
43 x 14,5 x 14,5 cm.
2,5 Units/lm / 2,85 Kg.

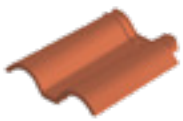
Chimney d.130
20,4 Øext-18 Øint x 23,5 cm.
2,15 Kg.

Ventilation Cap
24,5 Øext-22 Øint x 6 cm.
1,70 Kg.

Eave Closure
13,8 x 7,1 x 6,8 cm.
5 Units/lm / 0,60 Kg.

TB-12®

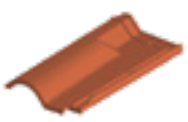
Half TB-12® Roof Tile
43,9 x 16 x 6,5 cm.
2,5 Units/lm
1,80 Kg.



TB-12® Tile and a Half
43,9 x 36 x 7 cm.
2,5 Units/lm
4,50 Kg.

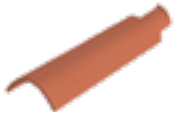
2/3 TB-12® *
30,5 x 26,5 x 7 cm.
5 Units/lm
2,20 Kg.

2/3 Tile and a Half
TB-12® *
30 x 36,2 x 7 cm.
3,24 Kg.



TB-12® Ventilation
43,9 x 26 x 7 cm.
3,20 Kg.

TB-12® Chimney Carrier
43,9 x 25,5 x 11 cm.
16 Øext-13 Øint / 4,15 Kg.



TB-12® Cover
DecoCurved®
37 x 17 x 7 cm.
5 Units/lm / 2,00 Kg.

TB-12®
Pan DecoCurved®
47 x 16 x 7 cm.
5 Units/lm / 2,50 Kg.

TB-4®

TB-4® Curved Edge
(Left/Right)
43 x 13,5 x 14 cm.
2,5 Units/lm / 2,55 Kg.

Half TB-4® / Pan
DecoCurved® TB-4®
44 x 15,5 x 6 cm.
2,5 Units/lm // 1,83 Kg.

One Half TB-4®
25 x 26 x 6 cm.
5 Units/lm / 2,30 Kg.

TB-4® Ventilation
44,2 x 26 x 10 cm.
3,50 Kg.

TB-4® Chimney Carrier
44,2 x 26 x 18 cm.
16 Øext-13 Øint / 4 Kg.

One Half TB-4® Cover
DecoCurved®
25 x 16 x 5,5 cm.
5 Units/lm / 1 Kg.

TB-4® Pan
DecoCurved®
46 x 16 x 6 cm.
5 Units/lm / 2,60 Kg.

TB-10 Tech

Half TB-10 Tech
Roof Tile
47,5 x 18 x 7,5 cm.
2,2 Kg.

TB-10 Tech
Tile and a Half
47,5 x 41 x 7,5 cm.
5,2 Kg.

TB-10 Tech Ventilation
47,5 x 28,2 x 7,5 cm.
3,6 Kg.

TB-10 Tech
Chimney Carrier
47,5 x 28,2 x 18 cm.
20 Øext-14 Øint / 4,6 Kg.

Chimney d.140
22,5 Øext-20 Øint x 23,5 cm.
2,35 Kg.

* While stocks last.
Dimensions in centimeters. Check finishing colours for different accessories.

TB-12®
Bidasoa®

TB-12®
Brown

S-interlocking roof tiles are easy to fit and versatile, adaptable to any type of project. Always offering the best results in every building.

TB-10 Tech
Fosca


TB-10 Tech
Entrepins


TB-12®
Graphite


TB-4®
Vilaterra®


TB-10 Tech
Centenaria® Ground

TB-12®
Bidasoa®

TB-12®
Castilla

A wide range of finishings make possible to create roofs in harmony with the environment.

TB-12®
Brown


TB-10 Tech
Centenaria® Ground

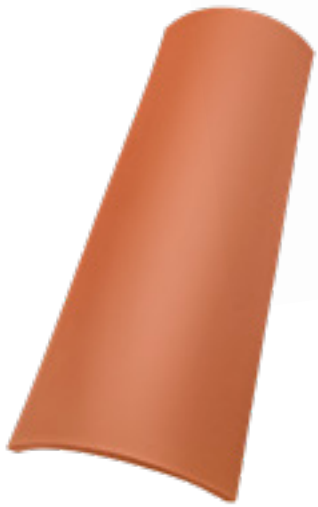

TB-10 Tech
Fosca


TB-12®
Castilla


TB-4®
Vilaterra®

C-50.21 Celler® - Centenaria® Ground

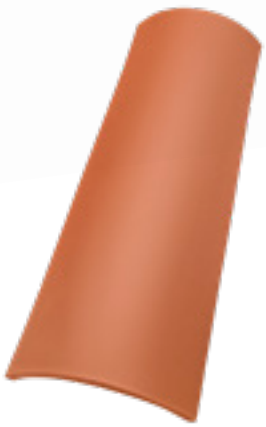
CURVED Roof Tiles



C-50.21 Celler®
C-45.20

Big size curved roof tiles formats. Made by extrusion process. Provides dimensional continuity with a uniform conical profile.

P.80



C-40.19
C-40.15

Small size curved roof tiles. Curved conical profiles with convergent edges, which facilitate the fitting of pans and covers with the same format.

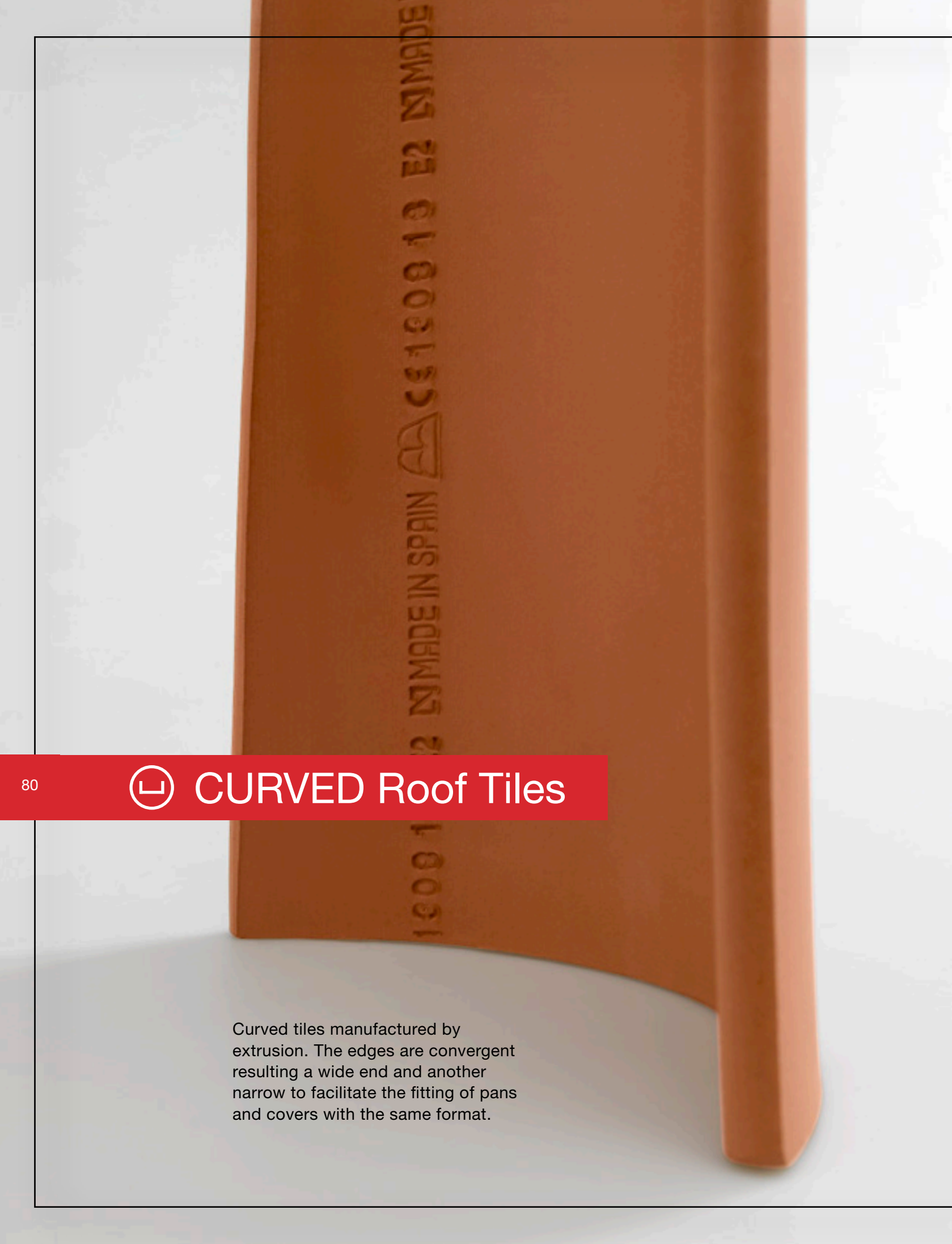
P.80

STEP CELLER 50/45

Step Celler pan tile. Ideal for dry fitting of big size curved roof tiles.

P.86

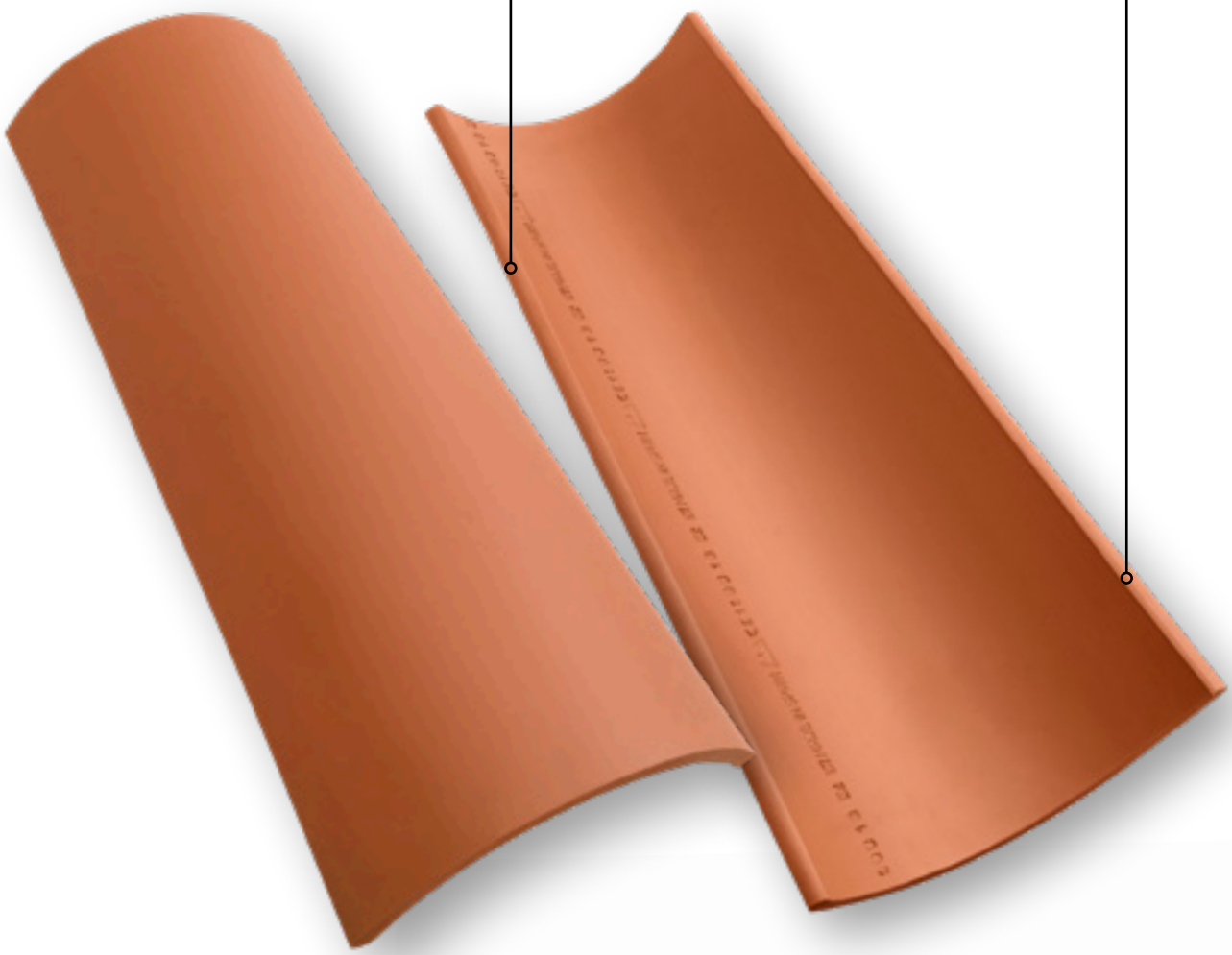
CURVED Roof Tiles



Curved tiles manufactured by extrusion. The edges are convergent resulting a wide end and another narrow to facilitate the fitting of pans and covers with the same format.

Perfect installation without cuts

Rounded edges



Minimum Slope 26%

C-50.21 Celler® Characteristics	
Width	210/170 mm
Length	500 mm
Weight	2,4 kg/tile
Tiles /s.q. m.	18 units

C-40.19 Characteristics	
Width	180/140 mm
Length	408 mm
Weight	1,6 kg/tile
Tiles /s.q. m.	30 units

C-45.20 Characteristics	
Width	200/160 mm
Length	450 mm
Weight	1,95 kg/tile
Tiles /s.q. m.	25 units

C-40.15 Characteristics	
Width	150/116 mm
Length	408 mm
Weight	1,35 kg/tile
Tiles /s.q. m.	12 units

Approximate values: Installation must comply with Code of practice for the design and fixing of roofs with clay roofing tiles for the region and Tejas Borja specifications. A tolerance of 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024.

C-50.21 Celler® / C-45.20

C-50.21 Celler® - Centenaria® Ground

C-50.21 Celler®

NATURE

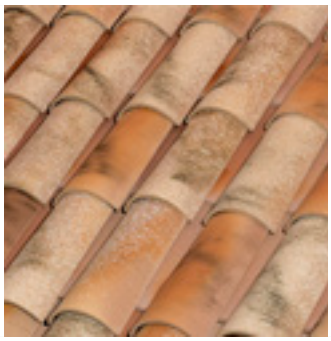
Red

Fosca

Manoir®

Vilavella®

Edetania®



Lamalou®

Brown

Montseny

Jaspeada White

CENTENARIA®

Ground

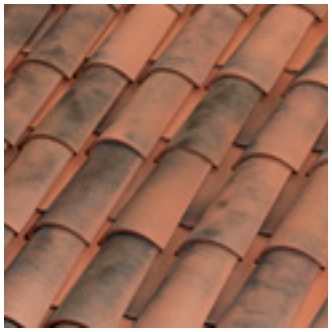
Mediterrania®

Sand

C-45.20

NATURE

Red



Moss Red

C-40.19 / C-40.15

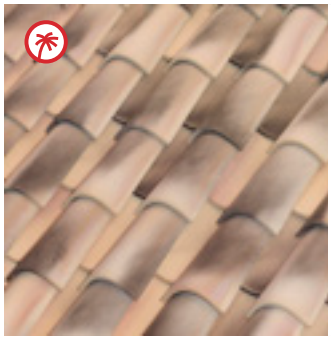
C-50.21 Celler® - Centenaria® Mediterrania®

C-40.19 NATURE

Red

Aged Red

Jaspeada White



Aged White

Rosarena®

Vilavella®

C-40.15 NATURE

Red

Aged Red

Fosca

Brown

C-40.19 CENTENARIA®

Mediterrania®

Sand

C-40.15 CENTENARIA®

Ground

Step Celler roof tile with nibs on its underside to be placed in the pan position, essential for a proper water drainage in roofs with curved tiles (Only for C-50.21 Celler® or C-45.20 roof tiles).

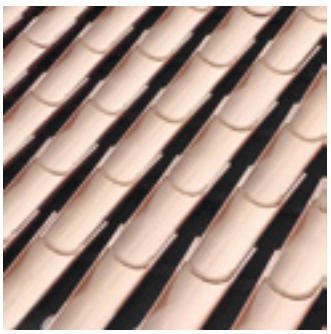
STEP CELLER 50/45

STEP CELLER 50/45
C-50.21 Celler® - Centenaria® Ground

STEP CELLER 50/45

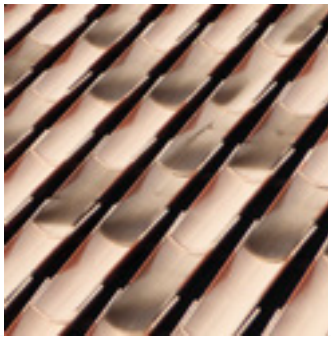
NATURE

Red

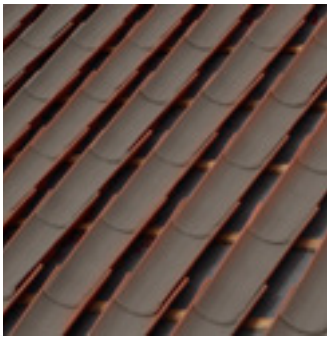


Jaspeada White

Manoir®



Serrania



Fosca Brown

Step Celler 50/45 Manoir® roof tile: Matches with Centenaria® Ground and Manoir®.
Step Celler 50/45 Serranía roof tile: Matches with Centenaria® Mediterrània®, Centenaria® Sand, Vilavella®, Edetania®, Lamalou® and Montseny.
Step Celler 50/45 Fosca roof tile: Matches with Fosca and Brown.

STEP CELLER 50/45 Characteristics	
Width	205/165 mm
Length	500 mm
Weight	2,50 kg/tile
Tiles /s.q. m.	10 units

Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of 2% is allowed on the dimensions of the roof tiles according to UNE - EN 1024.

Accessories

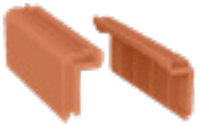
C-50.21 Celler® - Centenaria® Ground

CURVED ROOF TILES

Under Ridge
24 x 12,2 x 5,6 cm.
5 Units/lm (on monopitch)
0,80 Kg.

Chimney d.130
20,4 Øext-18 Øint x 23,5 cm.
2,15 Kg.

Ventilation Cap
24,5 Øext-22 Øint x 6 cm.
1,70 Kg.



Straigt Edges for Curved Roof Tiles (Left-Right)
47,5 x 19,5 x 7 cm.
2,5 Units/lm / 2,80 Kg.

C-50.21 Celler®

C-50.21
Hip Starter
50 x 17,5 x 7,5 cm.
2,80 Kg.

C-50.21 - 3 Ways
32,5 x 30,5 x 15 cm.
2,70 Kg.

C-50.21 - 4 Ways
40,5 x 37,5 x 15,5 cm.
5,50 Kg.

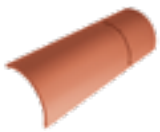
C-50.21
Chimney Carrier
50 x 21,5-17,5 x 18 cm. /
16 Øext-12 Øint cm. / 3,20 Kg.

C-50.21 Ventilation
50 x 21 x 17,4 cm.
2,60 Kg.

C-50.21
Eave Closure
27 x 9,7 x 11 cm.
4 Units/lm / 0,90 Kg.

C-40.15

C-40.15 Ventilation
40,5 x 15 cm.
1,70 Kg.



Booster C-40.15
40,5 x 15 / 7 cm. L Cutted lenght
1,35 Kg.

C-40.15 Under Ridge
20 x 10,5 x 5,5 cm.
5,5 Units/lm (on monopitch)
0,50 Kg.

C-45.20

C-45.20 Ventilation
45,5 x 20-16 cm.
2,10 Kg.

C-40.19

C-40.19 Ventilation
40,5 x 18-14 cm.
1,70 Kg.

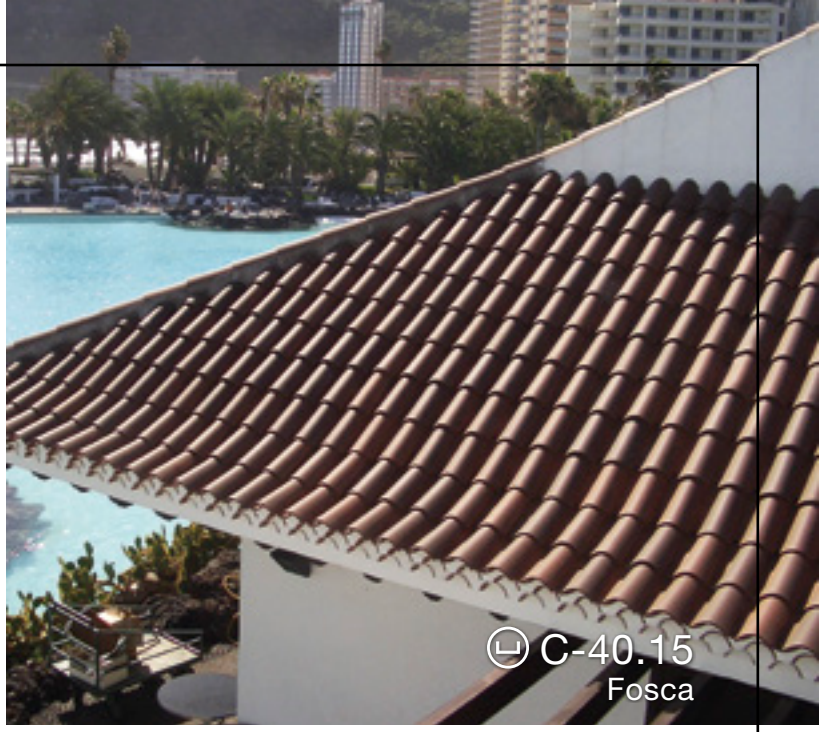
Dimensions in centimeters.
Check finishing colours for different accessories.

C-50.21Celler®
Centenaria® Ground

C-50.21Celler®
Centenaria® Mediterrania®

Curved roof tiles are the most known format for pitched roofs, as they can meet any construction need.

C-50.21Celler®
Jaspeada White


C-40.15
Fosca


C-50.21Celler®
Edetania®


C40.19
Centenaria® Sand


C-50.21Celler®
Montseny

C-25.12 / Escama

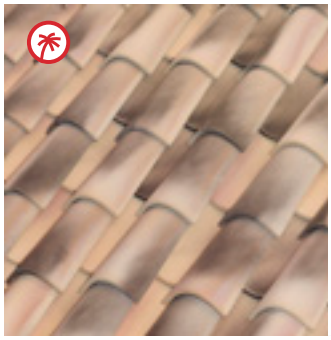
Decorative roof tiles.
Ideal for small roof areas.

C-25.12 NATURE

Red

Vilavella®

Jaspeada White



Aged White

Escama

Red

Escama ACCESSORIES

"Gallon" Ridge
25 x 17,5 x 9,7 cm.
4,5 Units/lm / 0,75 Kg.

"Gallon" Ridge with Ball
25 x 17,5 x 13 / 4,5 cm.
Units/lm / 0,85 Kg.

Winged Dragon End Ridge
40 x 15 x 16 cm.
1,95 Kg.

Achantus Leaf End Ridge
32 x 15 x 26,5 cm.
2,19 Kg.

CE

AENOR

C-25.12 Characteristics	
Width	120/95 mm
Length	250 mm
Weight	0,65 kg/tile
Tiles /s.q. m.	70 units

CE

Escama Characteristics	
Width	150 mm
Length	195 mm
Weight	0,40 kg/tile
Tiles /s.q. m.	78 units

Total waterproof of the entire roof surface is required for any pitch.
Approximate values: Installation must comply with Code of practice for the design and fixing of roofs with clay roofing tiles for the region and Tejas Borja specifications.
Note: C-25.12 roof tile is considered decorative accessory used to complement the roof. Therefore is Included in AENOR certificates of the main roof tile (see accessories).

TB-4® - Glazed Cognac

DECORATIVE PIECES

Decorative Piece A Ball
21 x 31,5 / 4,30 Kg.

Decorative Piece B Acorn
20,5 x 34 / 3,15 Kg.

Decorative Piece C Pine Cone
21,5 x 43 / 5,20 Kg.

Decorative Piece D Lollipop
16 x 48 / 4,00 Kg.

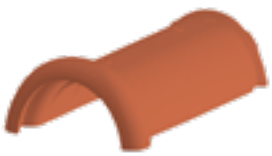
Decorative Piece E Gallego Lollipop
16 x 37 / 1,54 Kg.

Decorative Piece F Tulip
16 x 31 / 1,90 Kg.

Decorative Piece G Tower
16 x 43 / 1,60 Kg.

Decorative Piece H Pigeon
26 x 29 / Supporting base: 8.5 / 1,25 Kg.

CABALLETES BRETAÑA



Red Bretagna 1 Ridge
44,5 x 27 x 12 / 2,3 Units/lm / 3,50 Kg.
Max. Slope 87%-40.5º

Brown Bretagna 1 Ridge
44,5 x 27 x 12 / 2,3 Units/lm / 3,50 Kg.
Max. Slope 87%-40.5º

Red Bretagna 2 Ridge
36,5 x 25 x 12,5 / 3 Units/lm / 2,80 Kg.
Max. Slope 87%-40.5º

Brown Bretagna 2 Ridge
36,5 x 25 x 12,5 / 3 Units/lm / 2,80 Kg.
Max. Slope 87%-40.5º

Bretagna 2 Hip Starter Lugo Slate
36,5 x 25 x 12,5 / 3 Units/lm / 2,80 Kg.
Max. Slope 87%-40.5º

Bretagna 2 Hip Starter
Lugo Slate
42,8 x 25 x 12,5 / 3,45 Kg.

Bretagna 2 Straight End Cap
Lugo Slate
6 x 25 x 27 / 2,40 Kg.

Borja DECOR

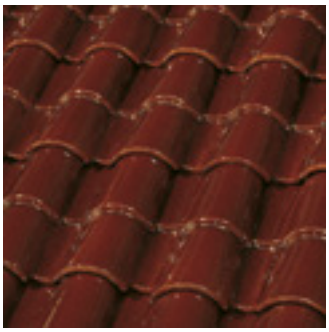
This line of roof tiles combines exclusive finishes and unbeatable visual sensations in a roof.

Iridescent colours for homes with its own personality which confer a unique look.

TB-12® - Glazed Green

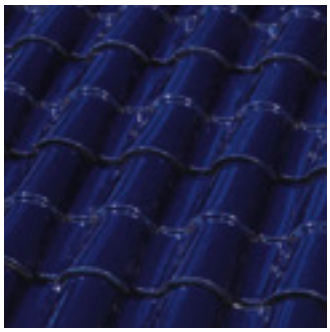
TB-12®/ TB-4® / ALICANTINA-12 / CURVED Roof Tiles / ESCAMA

GLAZED



Cognac

Green



Cobalt Blue

Carmin

White*

TAMIZADOS

Slate

Grey

Green

Brown

Blue

TB-4® - Irisado Green

TB-12®/ TB-4® / ALICANTINA-12 / CURVED Roof Tiles / ESCAMA

CRYSTAL

Crystal Reds

Elegant®

METALLICS

Copper*

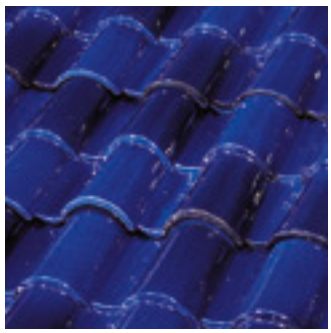
Lead*

TB-4®

IRISADOS

Cognac

Green



Blue

INSPIRATION

Ocre

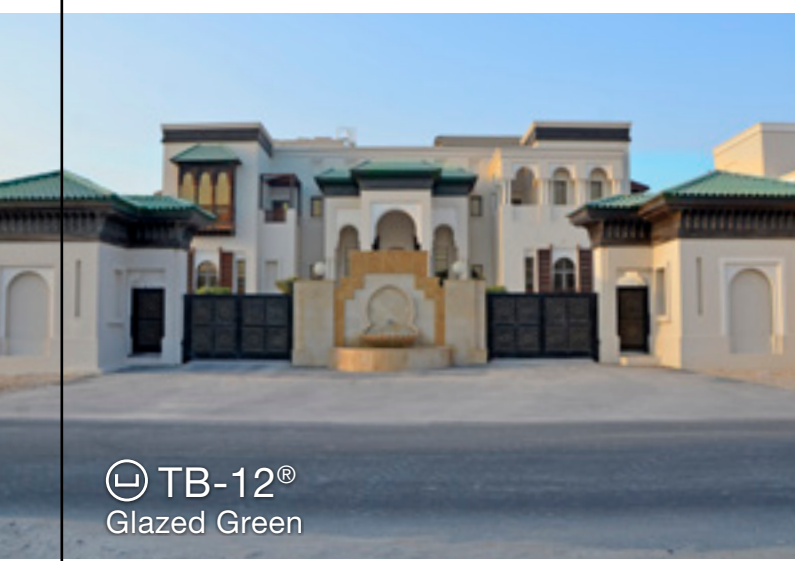
Indigo

Lienzo de Mar

* **The finishes:** White, Copper and Lead finishes are produced only on 1 side colour. **Elegant® finish,** it is produced only in TB-4®.
C-45.20 Roof Tile is not available in BORJAdecor®.
White Glazed finish, is available only in ALICANTINA-12.

CRAKLE (surface crackling), The superficial crackling can appear in some tiles with glazed application, concerning only the aesthetics and not the structure of the tiles, by what in the Standard regulation EN 1304 it is not considered to be a defect.

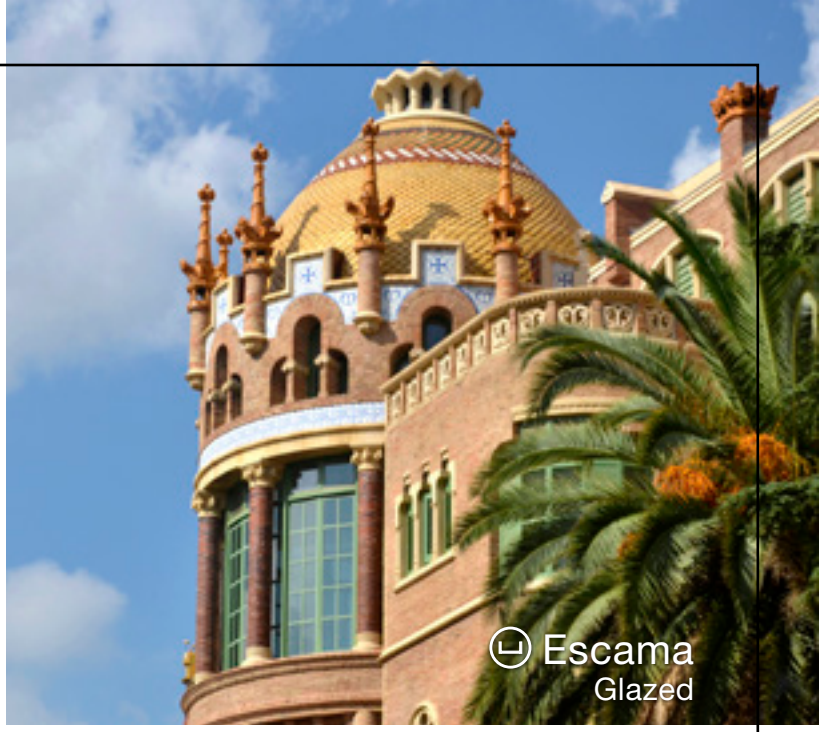
TB-4®
Crystal Red



TB-12®
Glazed Green

Unique roofs in their surroundings due to all colours and sparkles. Special combinations and finishings for distinctive homes.

TB-4®
Glazed Cognac


Escama
Glazed


TB-4®
Tamizado Grey


ALICANTINA-12
Glazed Blue

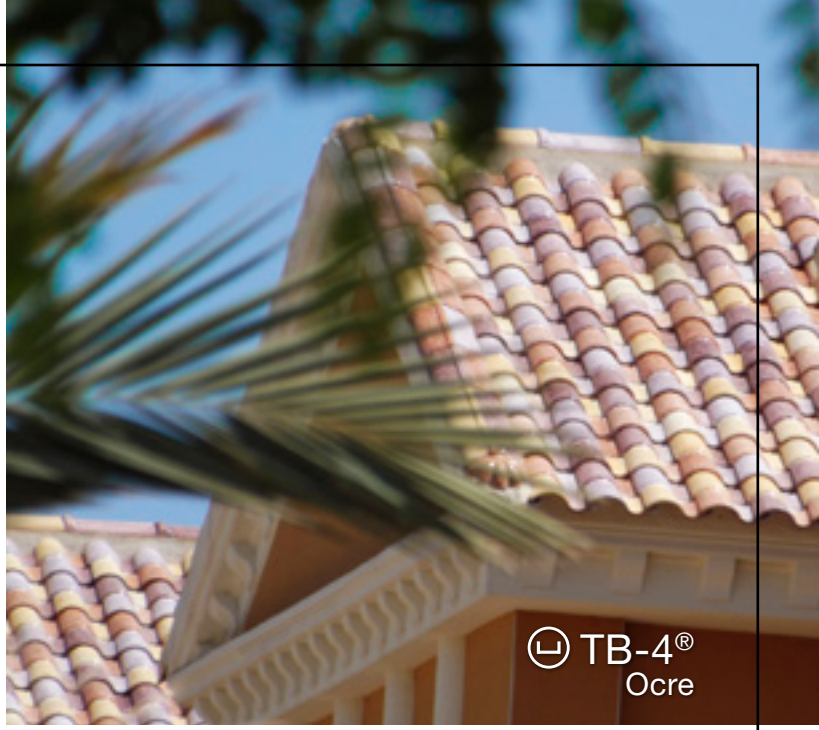

TB-4®
Glazed Green

TB-4®
Irisado Cognac

TB-4®
Irisado Blue

The beauty of BorjaDECOR® range is unchangeable over the years.

TB-4®
Elegant®


TB-4®
Ocre


TB-4®
Glazed Green

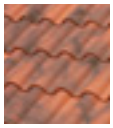
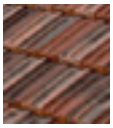
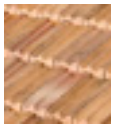

TB-4®
Lienzo de Mar


TB-12®
Carmin

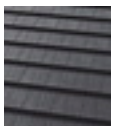
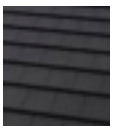
SUMMARY
prices by formats

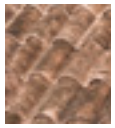
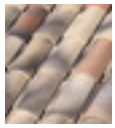
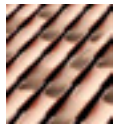
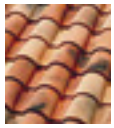
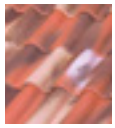
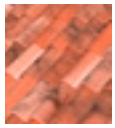
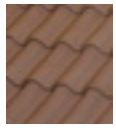
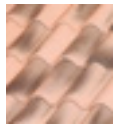
BorjaLINE

NATURE

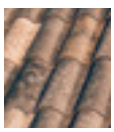
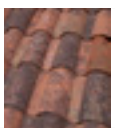
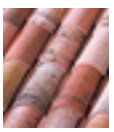
	 Red	 Aged Red	 Moss Red	 Fosca	 Nortegna	 Litoral	 Manoir®
FLAT-10 Tech	●		●				
TECHNICA-10	●		●				
ALICANTINA-12	●			●	●	●	
TB-10 Tech	●		●	●			●
TB-12®	●	●		●			●
TB-4®	●			●			
C-50.21 Celler®	●			●			●
TALÓN 50/45	●			●			●
C-45.20	●		●				
C-40.19	●	●					
C-40.15	●	●		●			
C-25.12	●						
ESCAMA	●						

PLAIN COLOUR

	 Chocolate	 Mid Grey	 Graphite	 Leon	 Natural Black
FLAT-10 Tech	●	●	●	●	●
TECHNICA-10	●	●	●		
TB-10 Tech	●		●		
TB-12®			●		
FLAT-5XL®				●	

 Rosarena®	 Vilavella®	 Edetania®	 Lamalou®	 Montseny	 Serranía**	 Vilaterra®	 Bidasoa®	 Castilla	 Brown	 Jaspeada White	 Aged White
		●	●								
●	●		●				●	●	●	⊛	⊛
						●					
	●	●	●	●					●	⊛	
					●					●	
⊛	⊛									⊛	⊛
									●		
	●									⊛	⊛

CENTENARIA®

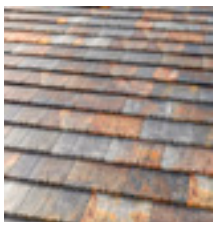
 Entrepins	 Irati	 Ground	 Mediterrania®	 Sand
TB-10 Tech	●	●	●		●
TB-12®			●	●	
C-50.21 Celler®			●	●	●
C-40.19				⊛	●
C-40.15			●		

Centenaria finishes in TB-10 Tech format does not include texture surface.

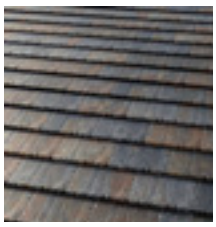
SUMMARY
prices by formats

Borja JET

Ceramic SLATE

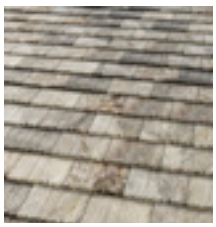


Nepal Orange

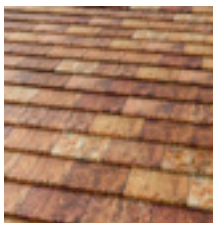


Paris Ocre

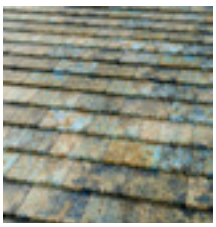
Ceramic STONE



Austin Grey



Denver Gold

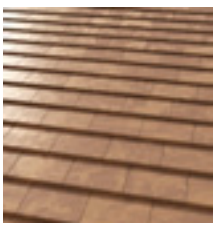


Denver Iris

Ceramic CEMENT

Sidney Ghaphite

Ceramic OXIDE



Tokyo Copper

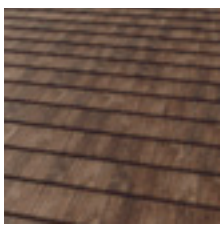
Ceramic COTTO

Ibiza Pink

Ceramic MARBLE

Roma Dark

Ceramic WOOD



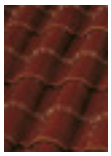
Toronto Oak

FLAT-5XL®	

FLAT-10 Tech	

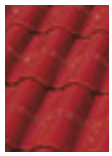
BorjaDECOR

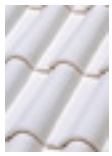
GLAZED


Cognac


Green

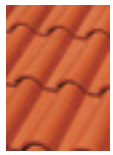

Cobalt Blue


Carmin


White

	Cognac	Green	Cobalt Blue	Carmin	White
ALICANTINA-12	●	●	●	●	●
TB-12®	●	●	●	●	
TB-4®	●	●	●	●	
C-50.21 Celler®	●	●	●	●	✻
TALÓN 50/45	●	●	●	●	●
C-40.19	●	●	●	●	✻
C-40.15	●	●	●	●	
C-25.12	●	●	●	●	✻
ESCAMA	●	●	●	●	●

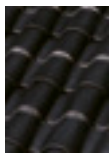
CRYSTAL


Crystal Red


Elegant®

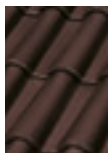
	Crystal Red	Elegant®
ALICANTINA-12	●	
TB-12®	●	
TB-4®	●	●
C-50.21 Celler®	●	
TALÓN 50/45	●	
C-40.19	●	
C-40.15	●	
C-25.12	●	
ESCAMA	●	

TAMIZADOS


Slate


Grey

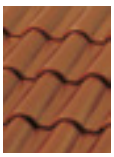

Green


Brown


Blue

	Slate	Grey	Green	Brown	Blue
ALICANTINA-12	●	●	●	●	●
TB-12®	●	●	●	●	●
TB-4®	●	●	●	●	●
C-50.21 Celler®	●	●	●	●	●
TALÓN 50/45	●	●	●	●	●
C-40.19	●	●	●	●	●
C-40.15	●	●	●	●	●
C-25.12	●	●	●	●	●
ESCAMA	●	●	●	●	●

METALLICS


Copper


Lead

	Copper	Lead
ALICANTINA-12	●	●
TB-12®	●	●
TB-4®	●	●
C-50.21 Celler®	●	●
TALÓN 50/45	●	●
C-40.19	●	●
C-40.15	●	●
C-25.12	●	●
ESCAMA	●	●

IRISADOS


Cognac


Green


Blue

	Cognac	Green	Blue
TB-4®	●	●	●

INSPIRATION


Ocre


Indigo


Lienzo de Mar

	Ocre	Indigo	Lienzo de Mar
TB-4®	●	●	●

Technical roof installation systems

To ensure that the roof is installed correctly, it is very important to have the highest quality, both in the materials selected and in the correct installation skills.

Tejas Borja offers several solutions that can be adapted to any type of project in order to achieve thermal insulated and properly ventilated roofs.

Thanks to our dry installtion roofing systems, we get long lasting roofs, which complie with current applicable regulations and standards.

BORJATHERM®

Thermal insulated roofing SYSTEM

The brand new Tejas Borja sarking system is a complete solution for external insulated pitched roofs, designed for use both repairing and refurbishing roofs on old buildings, or creating new projects. Available in different thicknesses to comply with any thermal requirement.

BORJASYSTEM

VENTILATED EFFICIENT ROOFS

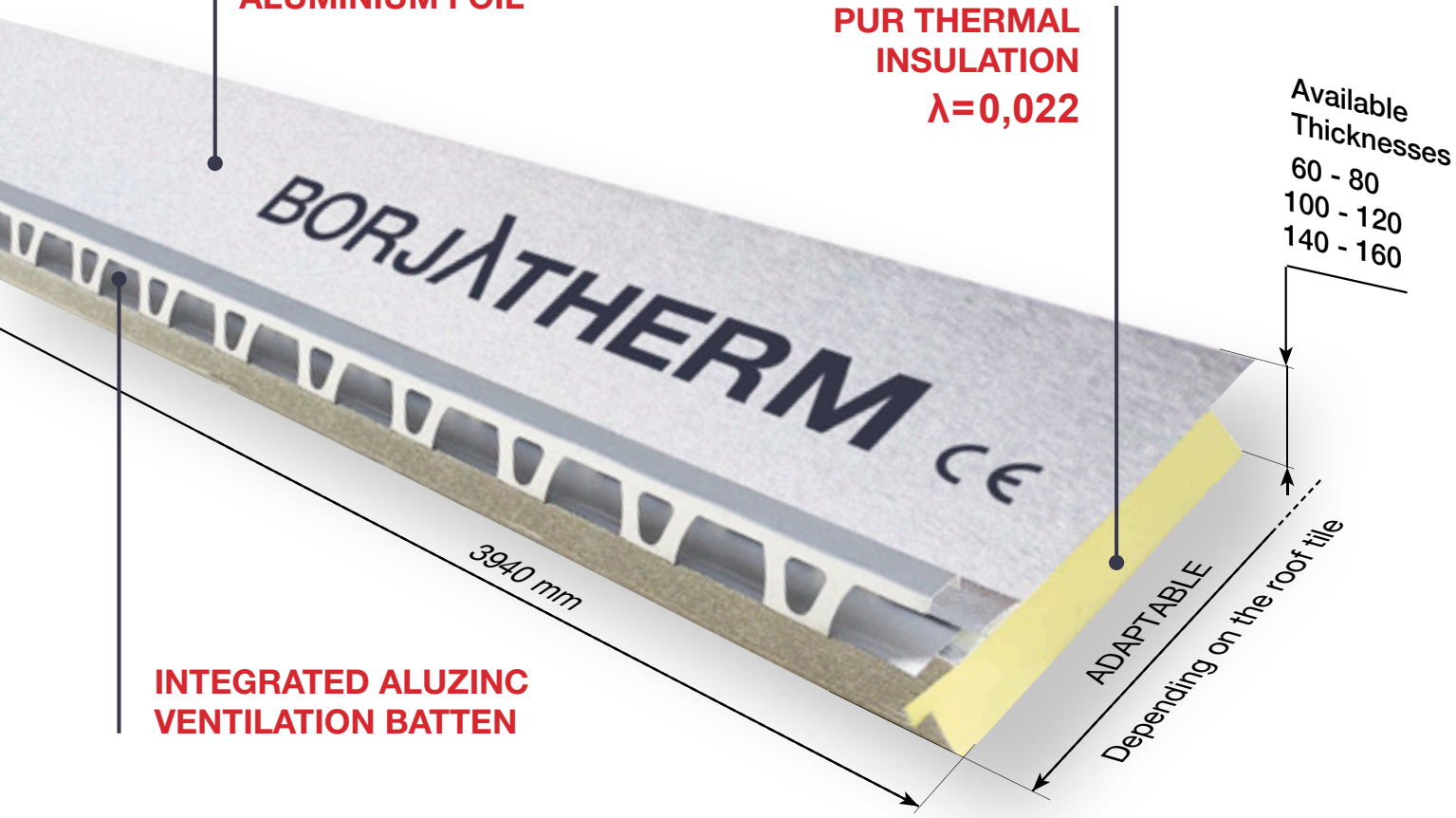
Double batten dry fix roofing system. Borjasystem can be adapted to various types and thicknesses of thermal insulation, and offers various options regarding waterproofing membranes and roof components.

BORJATHERM panels are light-weight and easy handling, although to very easy to install. These panels make unnecessary most of the products which used to be essential for the construction of a ventilated roof because the panel itself, installed directly onto the rafters, beams or inclined slabs, performs all the functions of these products in one.

The **BORJATHERM** insulated panels are made of a central core of polyurethane foam (a material with high-performance insulating properties), surrounded by a protective layer of aluminium foil and finished with an integrated Alu-Zinc batten to enable the fixing of the roof tiles.

As they are installed onto the existing roof structure, the panels form an unbroken external layer of insulation, completely free of thermal bridges.

This system proves the existence of long-lasting insulation which is quick and easy to install, and which provides maximum energy efficiency to the roof, offering significant financial savings compared to other roof insulation systems.



TÜV MANAGEMENT SERVICE ISO 9001

CE

SELF-SUPPORTING

Check resistances between supports.

Quick & easy installation
1,5
sq. m./panel

6 FUNCTIONS IN ONE UNIQUE ROOF SYSTEM

1. Self-supporting
2. Vapour barrier
3. Thermal insulation
4. Waterproof
5. Counter battens
6. Tile Fixing battens

Possibility to install BORJATHERM system on every type of roofing structure:

- Wood Structure
- Ceramic brick walls
- Concrete slabs
- Metal Structure
- Pre-stressed joists

Double Waterproofing

When installed according to our installation guide and with a minimum pitch of 30% (17°), **BORJATHERM** is an excelent under roof tile waterproofing, preventing possible accidental or damp caused by water leakage. Although, once the panels are installed on the roof slope, they make a first waterproofing layer that avoids the interior to get wet in case of rain during installation.

Quick and Easy to Install

No batten pre-setting needed.
The installation is done with two easy steps:

- **Fix the panels to the structure and sealing of the joints.**
- **Place the roof tiles on the integrated battens.**

With this roofing system the labor cost can be improved up to 40%.

The best isolation values in the market

Polyurethane foam is a solid and uniform material with a high insulating capacity thanks to its low thermal conductivity. BORJATHERM panels are coated with aluminium, which combined to the PUR foam becomes one of the best insulating materials in the building industry and guarantees the best thermal performance possible, along with being extremely light-weight, long lasting and thermally constant (-50/+100°C), which makes it ideal for use under roof tiles.

Thermal conductivity λof the main insulation products in buildings.

Insulating Material	**BORJATHERM**	XPS	MINERAL WOOL
Thermal conductivity **λ**	**0,022**	0,034 - 0,036	0,04

Thicknesses of different insulating materials required to obtain an insulation value of **R = 2,74 m²K/W**

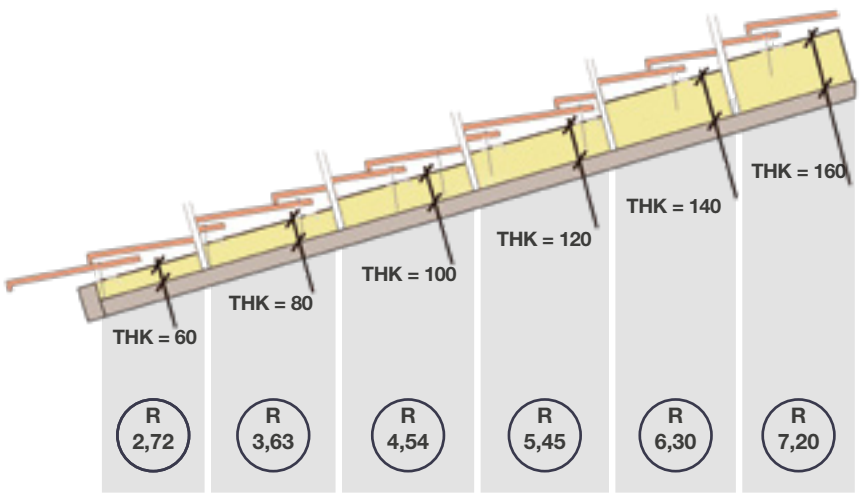
Insulating Material	Required thickness
BORJATHERM coated polyurethane	**6 cm**
Non-coated polyurethane	8 cm
Polystyrene XPS	10 cm
Mineral wool	11 cm

Thermal values obtained for each available thickness of **BORJATHERM** panels.

Thickness	60 mm	80 mm	100 mm	120 mm	140 mm	160 mm
Heat resistance R (m² • K / W)	2,72	3,63	4,54	5,45	6,30	7,20
U (W / m² • K)	0,37	0,27	0,22	0,18	0,16	0,14

Ideal for both refurbishment and new buildings

BORJATHERM
Roof Components

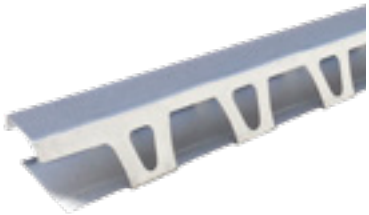


The wide range of thicknesses available in the **BORJATHERM** line, allows to get the needed thermal insulation for any type of house, enviroment or location, keeping the warm during winter and protecting from heat during hot season.

PANELS ((LENGHT 3.980 MM) *	BATTEN DISTANCE	
BORJATHERM PANEL 60	370 mm	395 mm
BORJATHERM PANEL 80	370 mm	395 mm
BORJATHERM PANEL 100	370 mm	395 mm
BORJATHERM PANEL 120	370 mm	395 mm
BORJATHERM PANEL 140	370 mm	395 mm
BORJATHERM PANEL 160	370 mm	395 mm

* Available for TB-12®, TB-10 Tech, TB-4®, FLAT-10 Tech, FLAT-5XL®, ALICANTINA-12, TECHNICA-10, STEP CELLER 50/45.

BORJATHERM ROOF COMPONENTS



Ventilated BORJATHERM Extra Batten

Butyl Adhesive Sealing Band

PU Roofing Foam

Wood slope-starting Battens (Various thicknesess)

PU Adhesive and Sealant

BORJATHERM screws (different models available)

BORJATHERM roofing system has been installed in many projects around the world because of the good performing parameters in different types of constructions and climatic conditions.

For quite every type of roof slope and with any type of roof tile, BORJATHERM is the best solution to protect the house.


BORJÀTHERM
BORJÀTHERM


BORJATHERM

A BORJASYSTEM ventilated roof, installed together with the corresponding layer of thermal insulation, improves the energy efficiency of the roof, playing an important role in reducing the heat which passes through the covering to inside the home.

This roofing system minimizes the chances of condensation forming in the thermal insulation and the materials of the exterior walls and roof, thanks to the use of waterproof and breathable membranes and the continuous circulation of air between the supporting structure and the tiles.

The incorrect use of mortar causes the majority of problems experienced with sloping ceramic tile roofs:

- Damp and leaks.
- Structural overloading.
- Cracks and breaks in parts and joints.
- Lack of adequate ventilation.

The BORJASYSTEM installation system defines the criteria to be followed for a complete dry installation of the roof without the use of mortar.

GREATER EFFICIENCY
increasing thermal and acoustic insulation, reducing energy consumption.

>50% LIGHTER
suitable for use in any climate.

BETTER VENTILATION
than that provided by other installation systems.

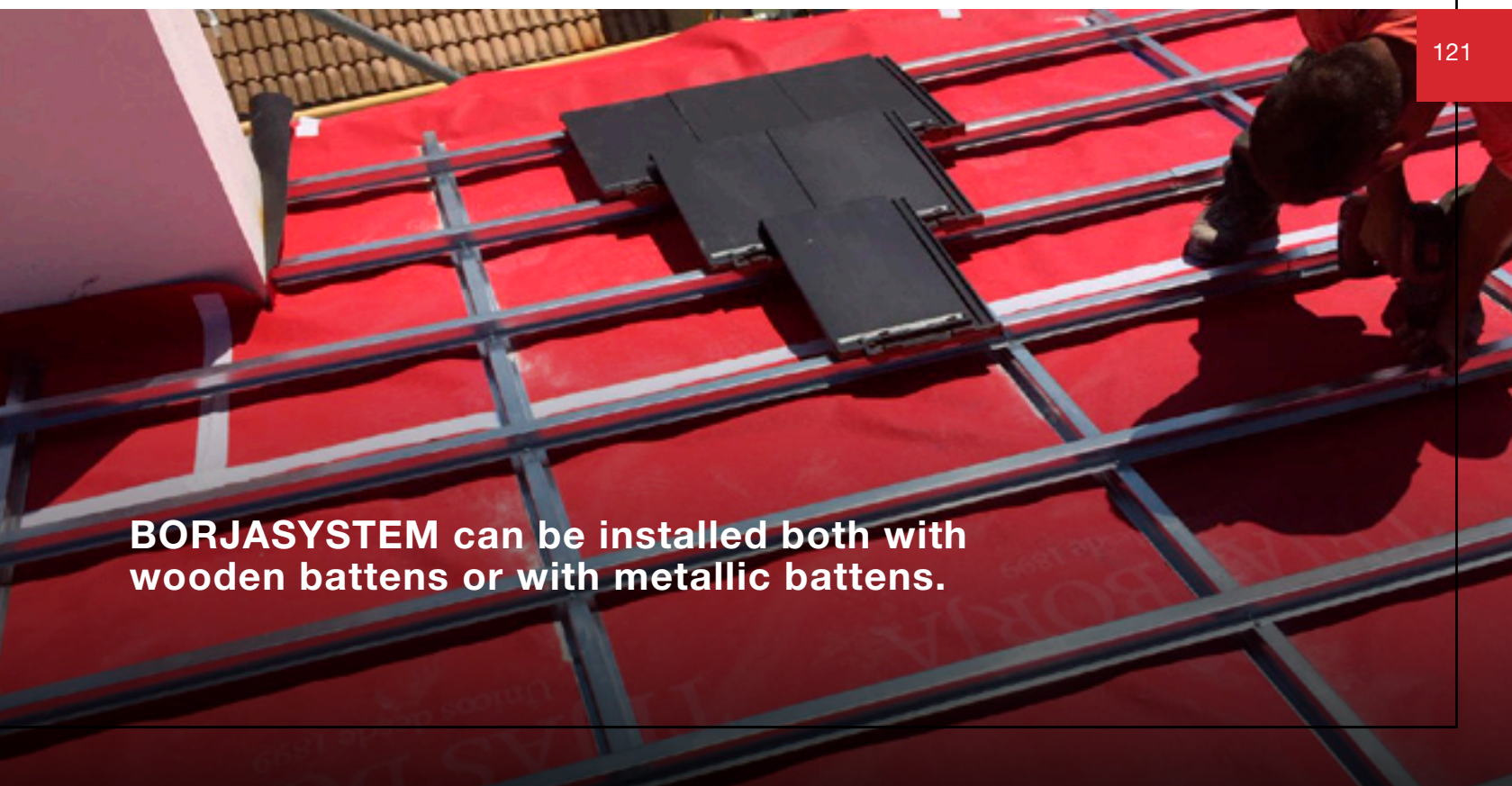
IDEAL FOR RESTORATION
of historic buildings due to the similarity of the materials to those used in traditional systems.

PREVENTS CONDENSATION
caused by moisture in the roof (Spanish Technical Code, CTE DB-H1).

NATURAL PRODUCTS
wood and ceramics free from asbestos or any other toxic substances.

FROST RESISTANT
suitable for use in any climate.

INSTALLATION GUARANTEE
for our tiles.



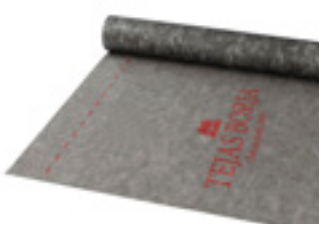
BORJASYSTEM can be installed both with wooden battens or with metallic battens.

BORJASYSTEM
Roof Components

WATERPROOFING

Waterproof and breathing membrane 180 Premium

Waterproof and breathing membrane TB 160

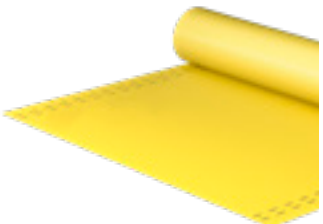


Waterproof and breathing membrane TB 130

Waterproof and breathing membrane Eco -135

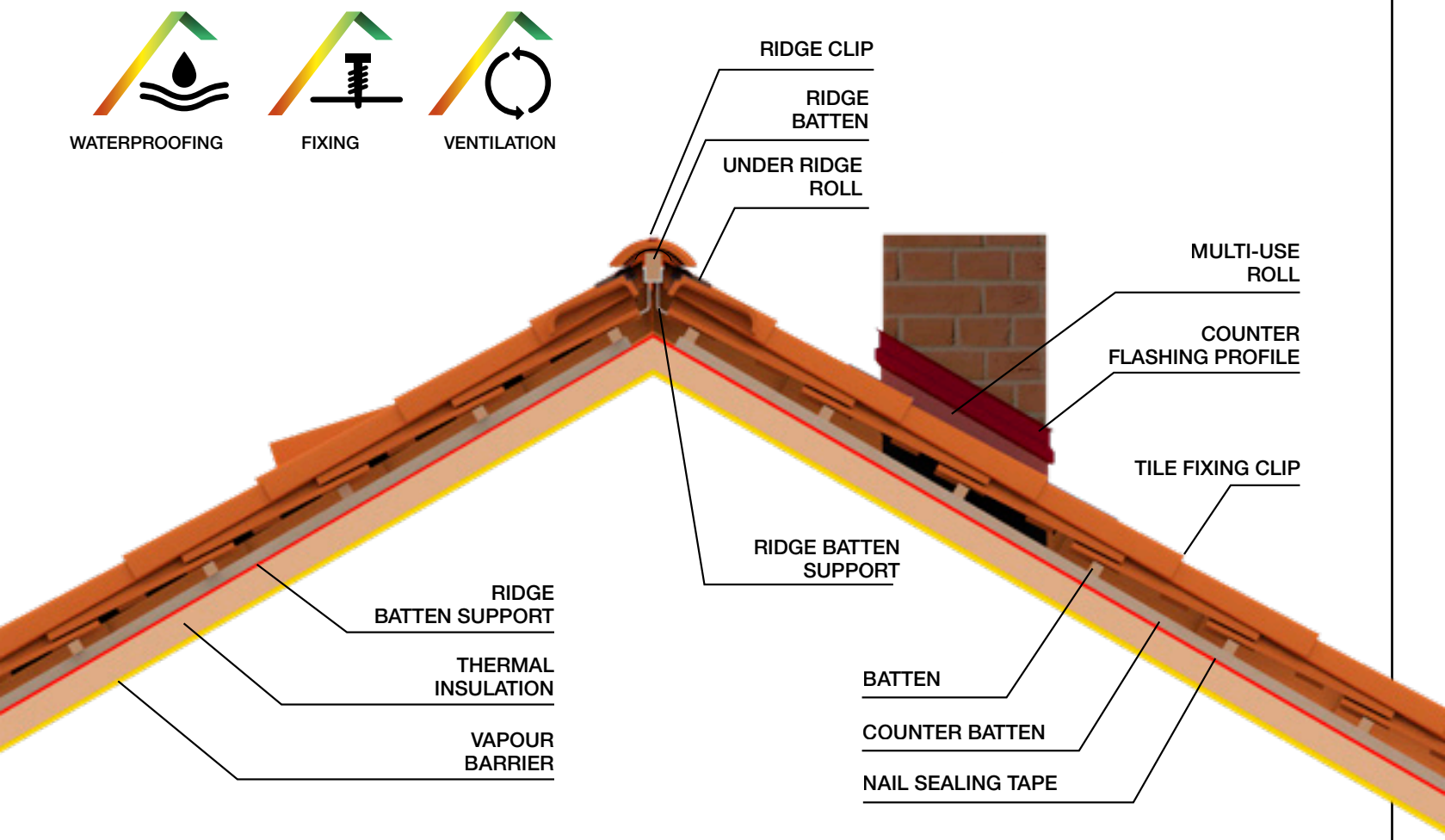
Nail sealing tape

Roofing adhesive tape 50 mm

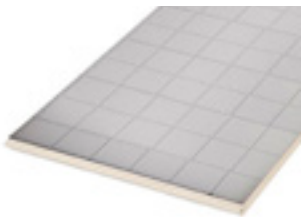


Vapour barrier 100 gr/sq. m.

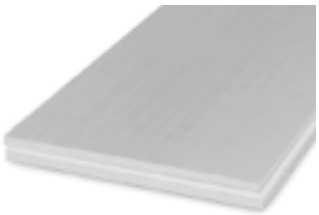
Bitumen Waterproof Membrane ALU



ISOLATION

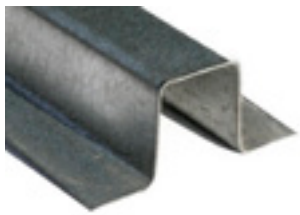


PIR Aluminium coated insulation



XPS Polystyrene insulation

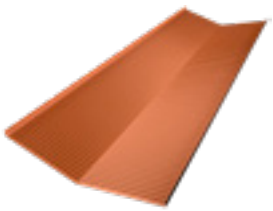
BATTENS



Metallic Batten 30x30

Wood Batten 40x30

ROOF COMPONENTS



Roof Valley Alu Flashing

Glass TB-12® Roof Tile

Glass ALICANTINA-12 Roof Tile

BORJASYSTEM screws (different models available)

VENTILATED BATTEN System

This type of installation is based on the principles of ventilated dry fixing BORJASYSTEM, but instead of two layers of battens, it is only installed with one of these. It can be done thanks to the perforated metallic batten that permits the air circulation under the roof tiles.

ROOF COMPONENTS VENTILATED BATTEN SYSTEM

Ventilated Batten 30x20

Ventilated Batten Screws (different types available)

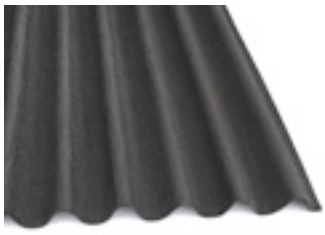
Corrugated Sheet SYSTEM

The installation of the roof tiles over bituminous or fiberciment corrugated sheets makes what is called a “double deck” roof. This system allows to install at very low pitches, up to 15%.

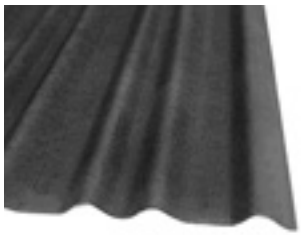
The system can be addapted to any type of roof tile. In case of curved tiles, they get fixed with special adhesives and in case of interlocking or flat tiles, a batten has to be installed over the sheets.

ROOF COMPONENTS VENTILATED BATTEN SYSTEM

Fiber ciment sheet 234 reinforced



Corrugated bitumen sheet for tiles with battens



Corrugated bitumen sheet 235

Butyl Flashing Band

PVC Batten 40x20

Corrugated System Screws (different types available)

PU Roofing Foam

PU Foam Applicator

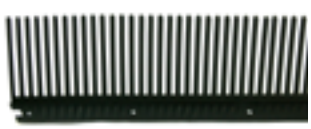
The first batten to be installed at the eaves must be at least 2 cm. higher than the rest of the battens to maintain the roof pitch in the first row of tiles. To achieve this additional height, a higher batten can be used, or an Eave comb + batten can be also installed on the first batten line.

To close the gap between the first battens and the roof tile, an eave comb must be used. There are different models and heights, depending on the roof tile model.

EAVES VENTILATION

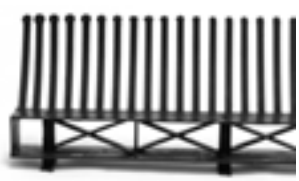
EAVE VENTILATION ROOF COMPONENTS

Ventilation comb 100 mm



Ventilation comb 60 mm

Bird stop grate 80 mm

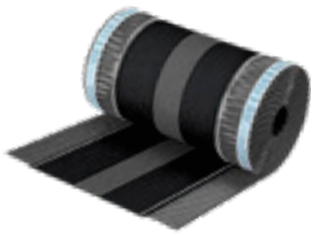


Batten + ventilation comb
(Batten 30 mm; comb 60 mm)

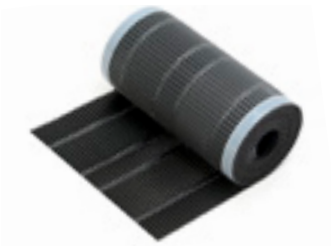
RIDGE AND HIP VENTILATION

The ridge batten gets fixed over the ridge batten supports, which are installed over the main roof battens. Ridge tapes are installed over the ridge batten to seal and ventilate the ridge. Once centred, the tape is fixed to the ridge using staples or nails at various points along the length of the batten. To waterproof the joint, the ridge tapes have two butyl adhesive strips on the underside on both edges of the tape. Finally the ridge pieces are installed, fixed mechanically to the ridge batten with screws or ridge clamps.

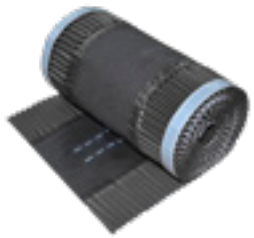
RIDGE AND HIP VENTILATION ROOF COMPONENTS



Under ridge mixed roll tape



Under ridgealu roll tape



Under ridge TB-ROLL (waterproof)

Under ridge rigid metallic Alu 140 with butyl

Ridge batten adjustable support 40 mm

Ridge batten support 40 mm

Ridge Wood Batten 40x30

Ridge Tile Fixing Clips

There may be joints between the roof and upper or lateral walls or around chimneys and other roof pipes. Adequate sealing of these joints must be done using Multi-use Waterproofing Flashing Tapes because these are critical points to ensure the correct roof waterproofing.

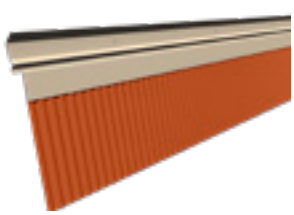
After the flashing band is installed, it's needed to fix it with the Counter Flashing Profile and seal the upper joint with PU Sealant.

ROOF FLASHING IN CHIMNEYS OR WALLS

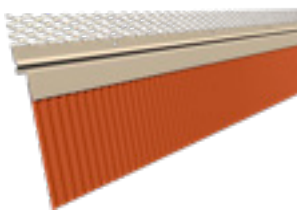
Multi-use Premium 300

Multi-use Premium 450

Multi-use Alu 300



Multi-use Rigid Metallic Alu 250



Multi-use Rigid Metallic Alu 250 (rendering)

Counter flashing profile

FIXING CLIPS

Additionally to the fixing screws and roofing adhesives, Tejas Borja presents a range of fixing clips to enhance the roof safety in case of storms or heavy winds.

ROOF TILE FIXING CLIPS

Fixing clip for S-interloocking and flat roof tile

Curved roof tile fixing clip

Flat roof tile fixing clip (Wood batten)

INFORMATION

Ceramic roof tiles have been traditionally used in roofing for centuries, providing protection from the weather and adding aesthetic value to the roof of any type of building.

Originally designed to cover houses, roofs are now used for new purposes in buildings, increasingly to protect building facades.

Ceramic tiles are a natural, durable and environmentally friendly product, as they do not harm the environment. At Tejas Borja we look after the product, monitoring the process at all stages from the rigorous selection of our clays to the final stage of the manufacturing process.

CHARACTERISTICS OF CERAMIC TILES

Our ceramic roof tiles easily meet all requirements associated with mechanical resistance, flexion, durability, waterproofing and thermal insulation. We also try to manufacture products that are easy to install on site, in order to make life easier for installers.

RESISTANCE

The mechanical resistance of roof tiles is of vital importance, given that people will occasionally have to walk on them in order to perform repairs or maintenance. For this reason, Tejas Borja roof tiles are the most resistant to flexion among those of its rivals.

DURABILITY

The durability of tiles is of great importance, due to the fact that they will be exposed directly to the elements without any additional protection.

Our tiles are guaranteed to perform well in frost and in accordance with current regulations (UNE - EN 1304, UNE - EN 539-1, UNE - EN 539-2). However, to ensure that a roof is effective and has a long useful life, it should be remembered that its quality will depend both on the tiles and the quality of the installation. For this reason, tiles must be installed in accordance with UNE - 136020 and our specifications.

Due to the implementation of new decorative technologies, Tejas Borja submits all its new products to additional certified tests to ensure along lasting performance both technical and aesthetic. All tests are performed by certified laboratories which submit the roof tiles to different ageing tests such as Light exposure as per ASTM G154-6, wear resistance as per UNE 138001:2008 IN, chemical Resistance as per ISO 10545-13 and Freeze/Thaw Resistance as per UNE-EN 1344:2002

WATERPROOFING

To prevent humidity as a result of condensation and leaks in the roof, the inner face of the tiles must have adequate ventilation. This ventilation will generate a continuous current of air, so as to remove moisture from the tiles and, in doing so, preventing them from being saturated with water.

In addition, an appropriate gradient will allow water to escape quickly and help avoid saturation. It is essential that minimum gradient requirements (determined as a function of weather conditions in the area where the project is located and the length of the skirts) be met. Under no circumstances can this gradient be less than 30%.

THERMAL INSULATION

Due to the importance of thermal insulation, both from a comfort and an energy-saving point of view, the performance of the materials chosen for the roof is relevant. In this regard, tests carried out at specialised institutions reveal that ceramic tiles perform best in terms of these parameters when compared to other roofing materials used for this purpose.

INSTALLATION

To ensure the good performance of our products installed on site and in order to meet the basic requirements referred to above, it is essential that the tiling be installed in accordance with their technical specifications.

The method of installation is the responsibility of the installer, and must comply with regulations in force. In addition, it should be remembered that for other unique work necessary in some roofs and which has not been foreseen in our instructions, good building practice for the installation must be observed at all times and the instructions contained in the relevant rules in force must be adhered to. In the event of any questions, contact our Technical Department.

You can find more information on the correct installation of ceramic roof tiles on our website, www.tejasborja.com

SAFETY CONDITIONS IN THE WORKPLACE

- All general provisions applicable in the general ordinance on workplace hygiene and safety will be adhered to.
- Materials collected in the roof will be disposed of. When necessary, the load will be distributed using slabs or elements that serve a similar purpose.
- No work will be done close to high-voltage power lines.
- Work will be suspended in the event of rain, snow or wind at speeds of more than 50 km/h. In the case of the latter, materials and tools that can be removed will be removed.
- Always use the necessary EPIs depending on each case, and in accordance with regulations in force.

DIFFERENCES IN TONE AND SUPERFICIAL ASPECTS OF THE ROOF TILES
(UNE - EN 1304)

Variations in tones inherent to the ceramic roof tile production process comply with regulations in force.

“Difference in tone” refers to variation in tone within the same colour and, by extension, different colours within the same production process. For monochromatic tiles, variations in tone inherent to the ceramic tile production process are tolerated in accordance with current regulations. Complaints are not accepted on the grounds of such variations. For more information, confirm with the plant before installation.

Indeed, during the production of ceramic tiles and their respective accessories, slight variations in tone can occur, which, being natural, can accentuate a very pleasant aesthetic impact if certain precautions are taken.

At all times, we recommend that before installation, tiles from different pallets allocated to the project be mixed in together so that, when they are installed, the various tones are as widely dispersed as possible.

In addition, during the production, packaging, handling and carriage of the ceramic tiles, scratches, abrasions or signs of friction can appear on the surface of the tiles. Together with possible creases in the clay, these features cannot be considered defects due to the fact that they do not affect the fundamental mechanics of the tiles (RESISTANCE, DURABILITY, WATERPROOFING AND THERMAL INSULATION), but rather are an aesthetic defect.

CRAQUELURE (superficial cracking)
Superficial microcracking can appear on some tiles with the application of enamels, producing only an aesthetic effect and not the structure of the tiles. As a result, such microcracking is not considered a defect under EN 1304.

EFFLORESCENCE
Some tiles can have a thin white film on them that becomes apparent shortly after installation. This can have a varying effect on the normal colour of the surface. In most cases, this efflorescence is temporary and due to soluble salts and impurities found in water, cement and aggregates in mortar, which will gradually disappear from the surface with precipitation and will not affect the functional characteristics of the tiles showing signs of efflorescence.

However, the weather will produce slight changes in tone over time.

ROOF MAINTENANCE

The accumulation of micro-organisms, moss, plants and other detritus on tiles, valley beams and gutters can hinder the movement of rainwater and the drying of roof tiles. This can pose a problem and cause leaks.

Roof tiles are made from a natural material. As a result, they must not be treated with any product that could alter their reaction to adverse weather conditions.

It is recommended that tiling and all of its parts, ceramics, insulation, evacuation channels, joints and support structure be inspected on a periodical basis. Whenever necessary, damaged elements must be repaired or replaced. All ceramic parts and evacuation channels must be cleared of any detritus and moss that has accumulated, so that drainage systems are not obstructed. Under the TBC (Technical Building Code), periodical inspections must be carried out every 1 to 3 years, depending on the component.

APPLICABLE CERTIFICATION STANDARDS

Tejas Borja complies with the following norms and certification standards:

- EN 1304. Clay roofing tiles for discontinuous laying. Product definitions and specifications.
- EN 1024. Geometric characteristics.
- EN 998-2. Specification for mortar for masonry. Part 2: Masonry mortar.
- EN 539-1. Impermeability (test conducted in accordance with Method 1 and Class 1).
- EN 539-2. (Frosting) Frost resistance (test conducted in accordance with C and E method).
- EN 538. Flexural strength.
- TBC (Technical Building Code).
- UNE - 136020. Code of practice for the design and installation of roofs made from ceramic roofing tiles.
- RP 34.02. Specific AENOR regulations for tiles and auxiliary parts made from clay.
- RP 34.00. Specific AENOR regulations for ceramic materials made from clay.
- ISO 9001. Quality management systems. Requisites.
- CE marking.
- ASTM C1167. Standard specifications for clay roof tiles.
- Miami Dade. Test procedure for wind and wind driver rain resistance of discontinuous roof system.
- DTU on building works.
  - NF P 31-201/202 (DTU 40.21) building works / Roof coverings made of slipping or grooved clay tiles.
  - NF P 31-201 (DTU 40.22) building works / Roof covering made from hollow terracota tiles.
- NF 063 certification benchmark. Clay roofing tiles. Certification benchmark for clay roofing tiles.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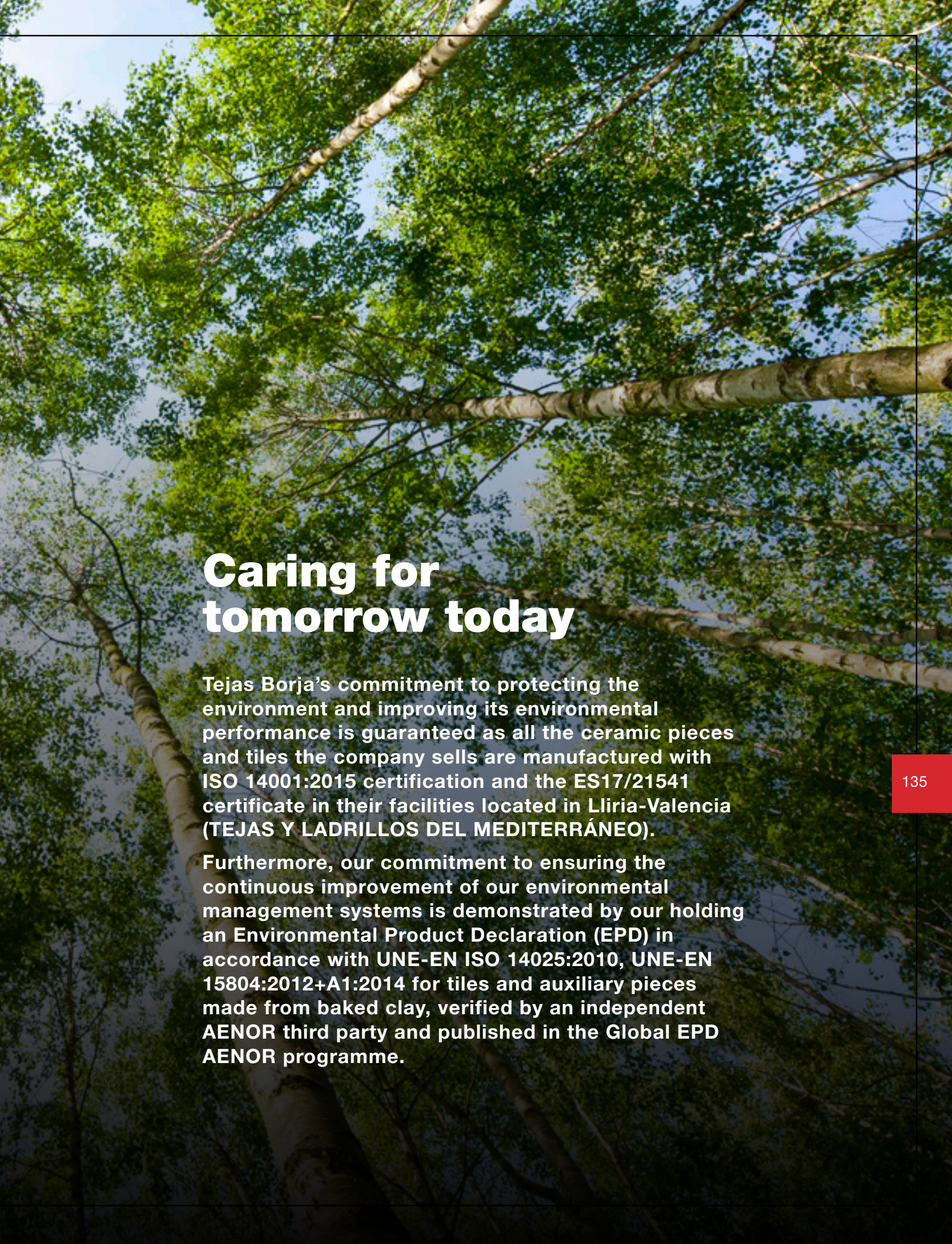
of the ceramic tile sector



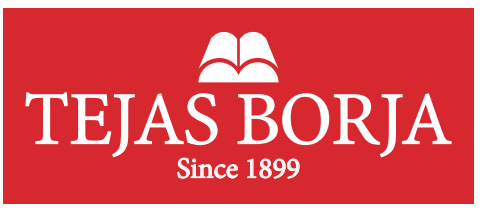
Caring for tomorrow today

Tejas Borja's commitment to protecting the environment and improving its environmental performance is guaranteed as all the ceramic pieces and tiles the company sells are manufactured with ISO 14001:2015 certification and the ES17/21541 certificate in their facilities located in Lliria-Valencia (TEJAS Y LADRILLOS DEL MEDITERRÁNEO).

Furthermore, our commitment to ensuring the continuous improvement of our environmental management systems is demonstrated by our holding an Environmental Product Declaration (EPD) in accordance with UNE-EN ISO 14025:2010, UNE-EN 15804:2012+A1:2014 for tiles and auxiliary pieces made from baked clay, verified by an independent AENOR third party and published in the Global EPD AENOR programme.

THE ® EVOLUTION

of the ceramic tile sector


TEJAS BORJA
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