

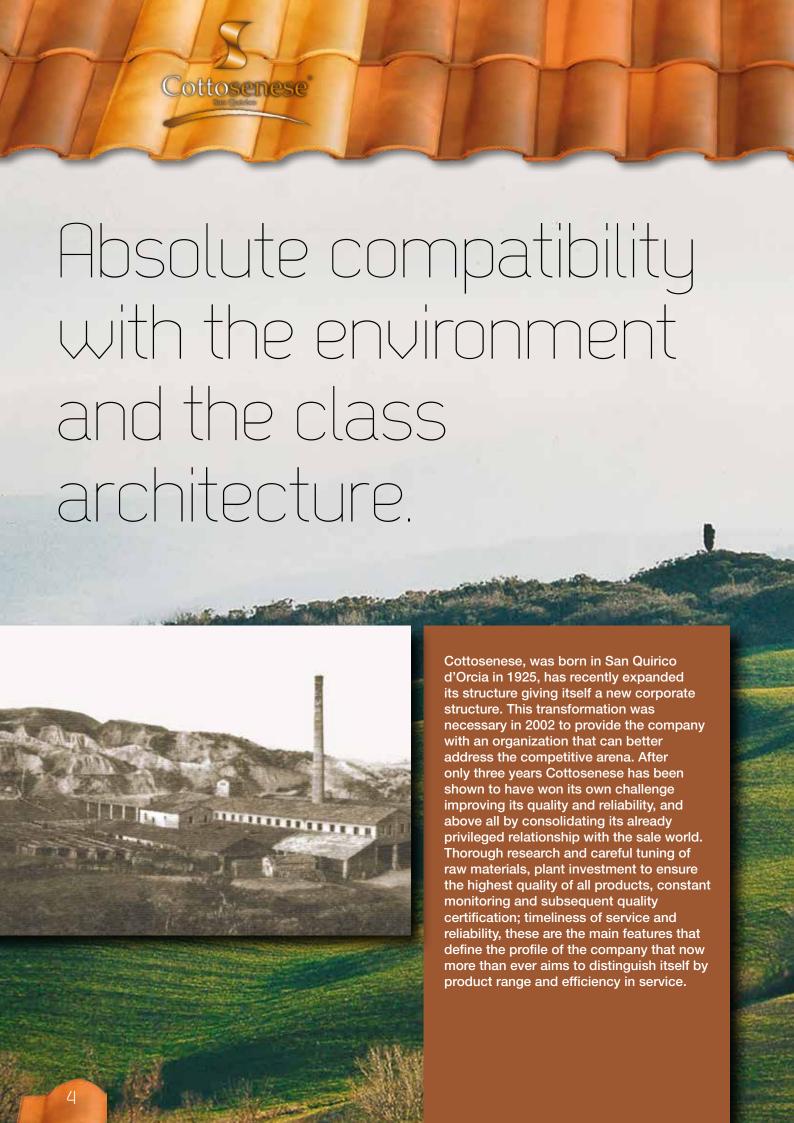


Solution of the second of the

Index

The Company	4
Portoghese Tile	6
Francigena Tile	10
Marsigliese Tile	16
Olandese Tile	20
Romana Tile	22
Embrice Tile	26
Roof and Covering	30
Fittings	34
Installation	36







The highest quality production in the tradition of our land.



The flexural strength, calcareous inclusions, frost resistance, permeability, dimensional tolerances, the absorption of water are just some of the tests that are carried out to ensure the absolute quality.

Very important are also the product certifications; Cottosenese is used to send a six-monthly sampling at its experimental workshop on traditional ceramics of Faenza, for the conduct of examinations for the issue of a constant quality certification.







Portoghese Tile



Portoghese Natural Red Tile

The Portoghese Natural Red Tile is the tile that best represents the Italian tradition of the roof. Due to its shape takes the appearance of the elements of the classic cover, fitting perfectly into any type of landscape. Combines practicality of installation and excellent resistance, water resistance and durability. It is produced in color with a natural effect characteristic of the clays of Siena.

Test	Results	Acceptance Limits
Breaking load flexural average	6.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \leq \pm \ 2.0\%$
Width, average tolerance	0.4%	$I_T \leq \pm 2.0\%$
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.2%	$\overline{C}_p \leq 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	34.8 cm
	•

Image colors are indicative. Weights and measurements are subjected to change.



Portoghese Antica Montalcino Tile

The Tile Portoghese Antica Montalcino was created with a careful game of natural colors, which reproduce the characteristics of the roof already aged with the nuances of the area especially appreciated all over the world.

Test	Results	Acceptance Limits
Breaking load flexural average	6.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \le \pm 2.0\%$
Width, average tolerance	0.4%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.2%	$\overline{C}_p \le 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	34.8 cm

Image colors are indicative. Weights and measurements are subjected to change.



Portoghese Antica Rocca Tile

The Tile Portoghese Antica Rocca is created with the intent to reproduce the Mediterranean colors present in many parts of our country, especially in some villages of the Val d'Orcia. Its shape takes the appearance of the elements of classic cover and fits perfectly in any type of landscape.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	6.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \leq \pm 2.0\%$
Width, average tolerance	0.4%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.2%	$\overline{C}_p \le 1.5\%$

Width 24.5 cm Weight 2.8 kg Pieces/square meter n. 14.5	Length	41 cm
Pieces/square meter n. 14.5	Width	24.5 cm
	Weight	2.8 kg
0.10	Pieces/square meter	n. 14.5
Step 34.8 cm	Step	34.8 cm

Portoghese Tile



Portoghese Antica San Quirico Tile

The Tile Portoghese Antica San Quirico reproduces in the appearance lights, shadows and pastel colors that the passage of time determines on the clay. The aging treatment, obtained with a natural process, guarantees a long life and brings us inevitably to the magical atmosphere of the environment of the Val d'Orcia.

Test	Results	Acceptance Limits
Breaking load flexural average	6.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	L _T ≤ ± 2.0%
Width, average tolerance	0.4%	$I_{T} \le \pm 2.0\%$
Average straightness	0.5%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.2%	$\overline{C}_p \le 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	34.8 cm

Image colors are indicative. Weights and measurements are subjected to change.



Portoghese Crete Senesi Tile

The Tile Portuguese Crete Senesi is made with ecological processes and characterized by a natural color obtained from the mixture of clays. without the addition of oxides or coloring surface. These roofing elements fit naturally both in renovation of existing buildings, both in new buildings, while respecting the tradition of quality that characterizes the company's production.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	6.14 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.13 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	1.1%	$L_T \le \pm 2.0\%$
Width, average tolerance	1.0%	$I_T \le \pm 2.0\%$
Average straightness	0.7%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.2%	$\overline{C}_{p} \leq 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	34.8 cm

Image colors are indicative. Weights and measurements are subjected to change.



Portoghese Millennium Tile

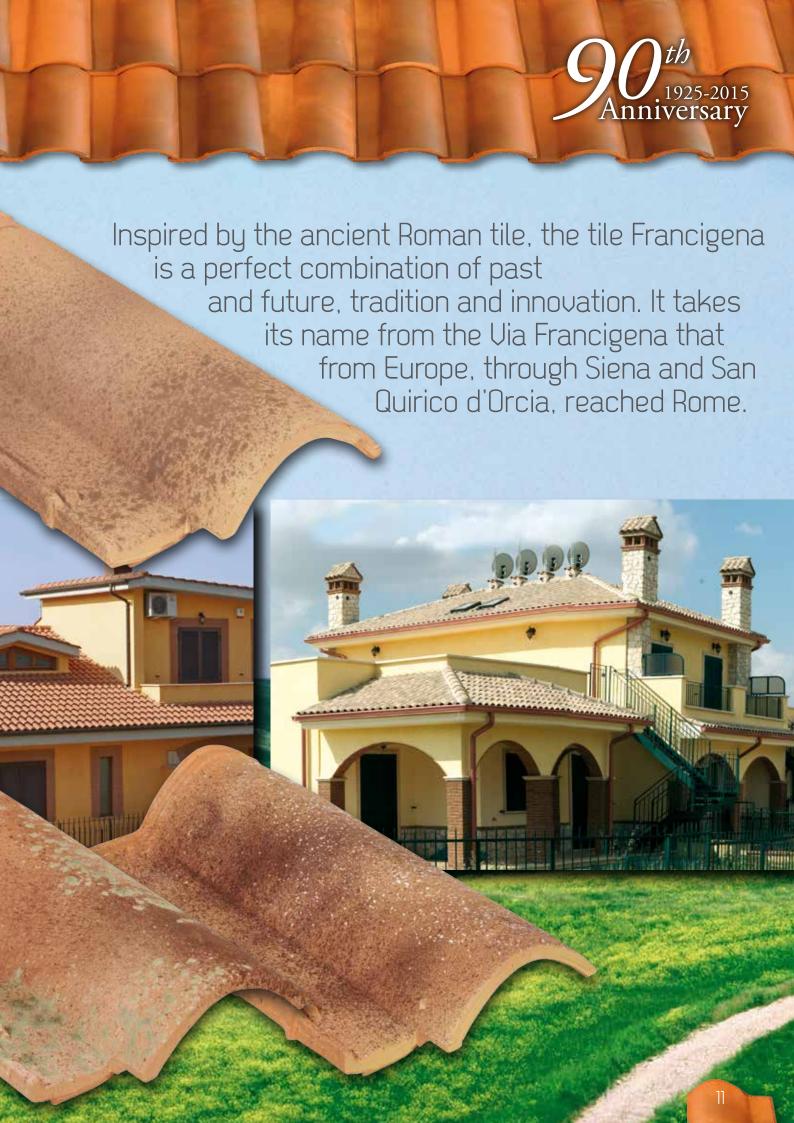
The Tile Portuguese Millennium, thanks to the special aging techniques, gives the product a "lived" aspect, typical of an old roof, but with all the guarantees of quality provided by modern technology.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	6.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \le 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	L _T ≤ ± 2.0%
Width, average tolerance	0.4%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.2%	$\overline{C}_p \le 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	34.8 cm





Francigena Tile



Francigena Natural Red Tile

The Tile Francigena Natural Red, inspired in ancient tile Roman model, represents a breakthrough in the installation and appearance. Highest expression of perfect union between past and future, tradition and innovation, named after the Via Francigena from Europe, through Siena and San Quirico d'Orcia, reached Rome. It was designed from the laboratory research and development of Cottosenese.

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \leq \pm 2.0\%$
Width, average tolerance	0.8%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.3%	$\overline{C}_{p} \leq 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Image colors are indicative. Weights and measurements are subjected to change.



Francigena Antica Montalcino Tile

The Tile Francigena Antica Montalcino is created thanks to a careful game of natural color, that reproduce the characteristic of the aged roof with the nuances of this area, especially popular around the world. These characteristics give to the cover the charm of the architectural marked by time and emphasize with elegance the exclusivity.

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \le \pm 2.0\%$
Width, average tolerance	0.8%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.3%	$\overline{C}_{p} \le 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Image colors are indicative. Weights and measurements are subjected to change.



Antica Francigena Pienza Tile

The Antica Tile Francigena Pienza is the expression of technological research company, aimed at obtaining a product aesthetically true to roof coverings aged naturally, but with a high degree of reliability performance. It was especially designed to meet the needs expressed by industry restructuring.

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \le \pm 2.0\%$
Width, average tolerance	0.8%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.3%	$\overline{C}_p \le 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Francigena Tile



Francigena Antica San Quirico Tile

The Tile Francigena Antica San Quirico is a tile that meets the criteria of modern building. It lends itself optimally for both recovery interventions, for both embodiments of coverages of particular aesthetic value. Also in this case the aging process allows to obtain tiles which reproduce a roof aged appearance.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	L _T ≤ ± 2.0%
Width, average tolerance	0.8%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.3%	$\overline{C}_p \le 1.5\%$

24.5 cm 3.15 kg
3 15 kg
0.10 119
n. 15
34 cm

Image colors are indicative. Weights and measurements are subjected to change.



Francigena Crete Senesi Tile

The Tile Francigena Crete Senesi originates from an accurate and innovative study conducted by laboratories Cottosenese that led to the creation of an absolutely "ecological" product. The merit of this new tile is in fact to have a natural color obtained from the mixture of clays, cooked with a unique system. The effect is to cover naturally "shaded surface" that mimics the effects of chromatic covers trees.

Test	Results	Acceptance Limits
Breaking load flexural average	6.93 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.13 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.8%	$L_T \le \pm 2.0\%$
Width, average tolerance	1.0%	I _T ≤ ± 2.0%
Average straightness	0.4%	$\overline{R}_L \le 1.5\%$
Average flatness	0.3%	$\overline{C}_p \le 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Image colors are indicative. Weights and measurements are subjected to change.



Francigena Gallura Tile

The Tile Francigena Gallura perfectly summarizes the technological peculiarities of coverage with the aesthetic aspects and colors of a region of its own. Characteristics that make it an easily usable both for recovery interventions, both for new construction.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	F ≥ 1.20 kN
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \le \pm 2.0\%$
Width, average tolerance	0.8%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \le 1.5\%$
Average flatness	0.3%	$\overline{C}_p \le 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Francigena Tile



Francigena Millennium Tile

The Tile Francigena Millennium is inspired in the model to the tile old, is an absolute novelty in appearance and assembly. It is characterized by a high aesthetic through which fits perfectly into any architectural environment and in every situation. The aging obtained with special techniques gives the product a "lived" a typical ancient roof, with all the guarantees of quality provided by modern technology.

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	$F \geq 1.20 \; kN$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \leq \pm \ 2.0\%$
Width, average tolerance	0.8%	$I_T \le \pm 2.0\%$
Average straightness	0.5%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.3%	$\overline{C}_p \le 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Image colors are indicative. Weights and measurements are subjected to change.



Francigena Orcia Tile

The Tile Francigena Orcia reproduces appearance lights, shadows and pastel colors that the passage of time determines on the roof. The aging treatment, obtained with a coloring process natural based, ensures long life and brings us inevitably to the magical atmosphere of the environment of the Val d'Orcia.

Test	Results	Acceptance Limits
Breaking load flexural average	7.04 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \le \pm 2.0\%$
Width, average tolerance	0.8%	I _T ≤ ± 2.0%
Average straightness	0.5%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.3%	$\overline{C}_p \le 1.5\%$

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm

Image colors are indicative. Weights and measurements are subjected to change.



Francigena Sardegna Tile

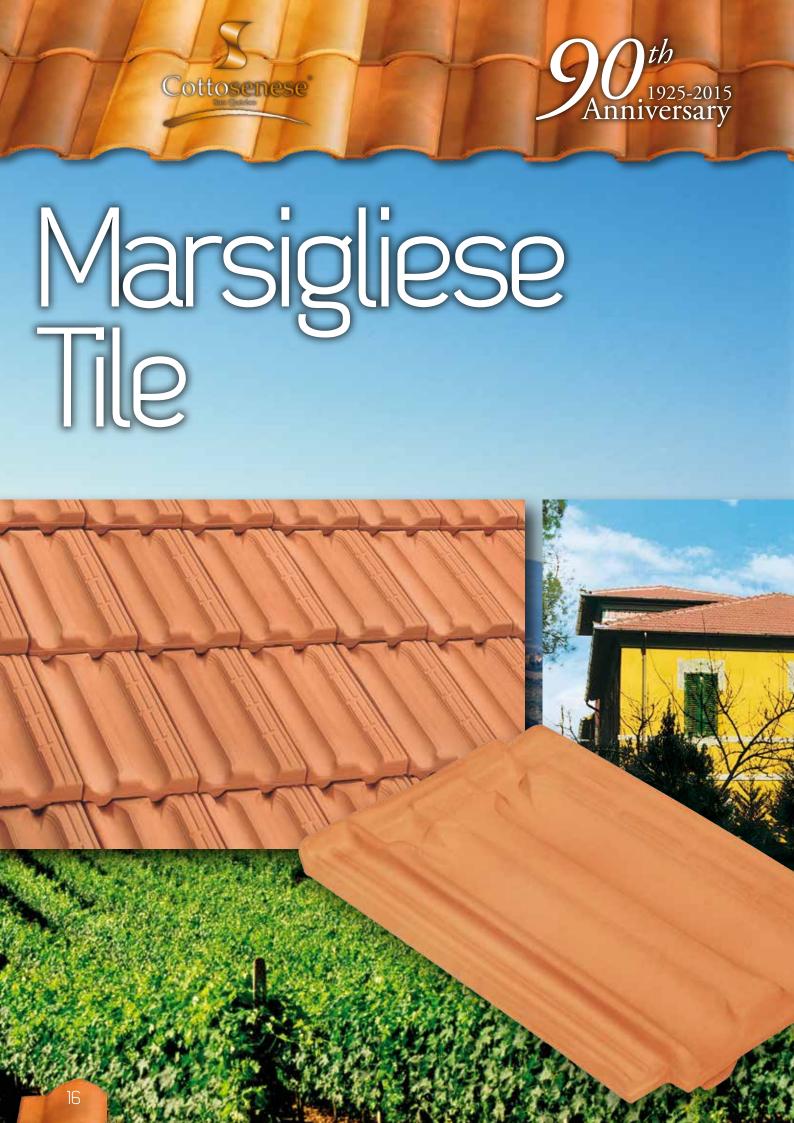
The Tile Francigena Sardegna stands out, thanks to the continuous technological research, the high degree of reliability and performance. The coverage has made a particular aesthetic value, accompanied by the elegance and exclusivity.

Technical datas

Results	Acceptance Limits
7.04 kN	$F \ge 1.20 \text{ kN}$
0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
compliant	compliant/not compliant
0.7%	$L_T \le \pm 2.0\%$
0.8%	I _T ≤ ± 2.0%
0.5%	$\overline{R}_L \le 1.5\%$
0.3%	$\overline{C}_p \le 1.5\%$
	7.04 kN 0.06 cm³ cm⁻² gg⁻¹ compliant 0.7% 0.8% 0.5%

Length	43 cm
Width	24.5 cm
Weight	3.15 kg
Pieces/square meter	n. 15
Step	34 cm





Marsigliese Tile



Marsigliese Natural Red Tile

The tile Marsigliese is definitely the tile pressed with more tradition, used since the nineteenth. This type may be mounted either in aligned rows, both in staggered rows.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	2.64 kN	F ≥ 1.20 kN
Water impermeability	0.08 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	1.5%	$L_T \leq \pm \ 2.0\%$
Width, average tolerance	0.3%	$I_T \leq \pm 2.0\%$
Average straightness	0.6%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.1%	$\overline{C}_p \le 1.5\%$

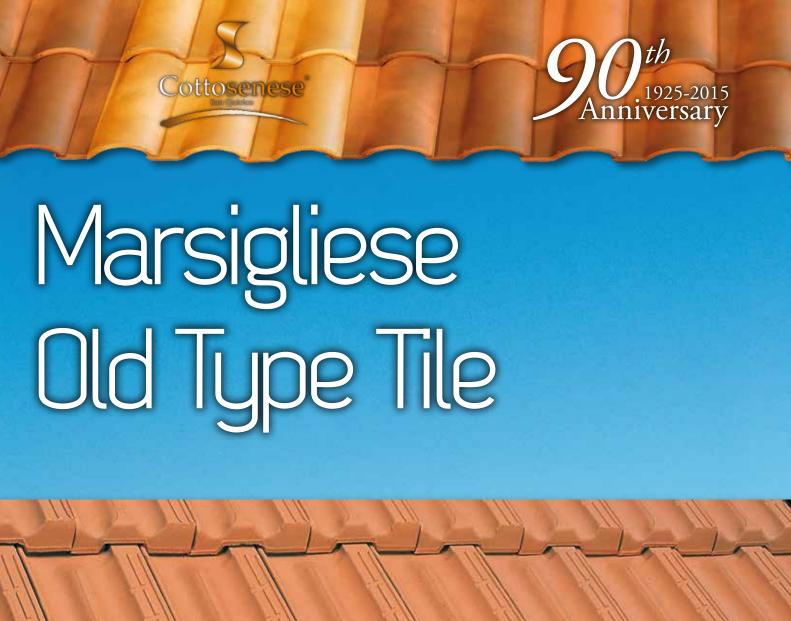
Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	35.8 cm

Image colors are indicative. Weights and measurements are subjected to change.





The main feature of this model of tile, as well as being used since the nineteenth, is the ability to be used with simplicity in the groundwater even slightly arched.



Marsigliese Old Type Tile



The Tile Marsigliese Old Type Natural Red is definitely the tile pressed with more tradition, used since the nineteenth. The assembly of this type is only staggered rows, and can be used in slopes even slightly arched.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	2.64 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.08 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	1.5%	$L_T \leq \pm~2.0\%$
Width, average tolerance	0.3%	$I_T \leq \pm 2.0\%$
Average straightness	0.6%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.1%	$\overline{C}_p \leq 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	35 cm

Image colors are indicative. Weights and measurements are subjected to change.



Marsigliese Millennium Old Type Tile

The Tile Marsigliese Millennium Old Type was used as the nineteenth. This Tile is a model with this particular type of aging, suitable for both the recoveries of old buildings and for new construction, because you can add it without great contrasts. The assembly is only in staggered rows.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	2.64 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.08 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	1.5%	$L_T \le \pm 2.0\%$
Width, average tolerance	0.3%	$I_T \le \pm \ 2.0\%$
Average straightness	0.6%	$\overline{R}_L \le 1.5\%$
Average flatness	0.1%	$\overline{C}_p \le 1.5\%$

Length	41 cm
Width	24.5 cm
Weight	2.8 kg
Pieces/square meter	n. 14.5
Step	35 cm

Image colors are indicative. Weights and measurements are subjected to change.

The Marsigliese Tile Old Type, widespread since the nineteenth, offers the possibility to realize the pitched roofs, also slightly curved.



Olandese Tile



The Tiel Olandese Natural Red is distinguished by the characteristic double interlocking, which ensures a higher resistance to the wind and the heavy precipitation than other tiles on the market; its design is pleasant in the linearity and allows the smooth in every context.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	3.94 kN	$F \ge 1.20 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.6%	$L_T \leq \pm \ 2.0\%$
Width, average tolerance	-1.3%	$I_{T} \le \pm 2.0\%$
Average straightness	0.9%	$\overline{R}_L \leq 1.5\%$
Average flatness	0.4%	$\overline{C}_{p} \leq 1.5\%$

42 cm
25.5 cm
2.8 kg
n. 14.5
35.5 cm

Image colors are indicative. Weights and measurements are subjected to change.





The Olandese Tile is the solution, from an aesthetic point of view, for those who like a tile with a small tile. The coverage obtained is very unique and is distinguished from all other types.



Pressed Romana Tile

Cottosenese

A modern tile, for building or upgrading covers "Tuscan", also ventilated.





Pressed Romana Natural Red

The Tile Pressed Romana Natural Red is the most classic of roofing tiles. Together with the tile, solves problems of renovation and restoration of historic buildings in a simple and optimal way. The natural red color typical of Siena is still a perfect placement in the construction of modern roofing, important and exclusive.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	3.14 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.3%	$L_T \le \pm 2.0\%$
Average straightness	0.7%	$R_L \le 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	0.8 mm 1.3 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

Length	43 cm
Width	28 cm
Weight	3.3 kg
Pieces/square meter	n. 10 (+ 10 tile)
Step	about 36 cm

Pressed Romana Tile



Pressed Romana Crete Senesi Tile

The Tile Pressed Romana Crete Senesi, made of the same natural process of the "Crete Senesi", plays the chromatic effects in the appearance of traditional roofing without the addition of pigments or other surface additives. The coloring is natural shaded surface, basically clear and pink, similar to the muted tones of the lands of the Val d'Orcia.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	3.70 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.13 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.7%	$L_T \le \pm 2.0\%$
Average straightness	0.4%	$R_L \le 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	1.6 mm 1.8 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

Step	about 36 cm
Pieces/square meter	n. 10 (+ 10 tile)
Weight	3.3 kg
Width	28 cm
Length	43 cm

Image colors are indicative. Weights and measurements are subjected to change.



Pressed Romana Millennium Tile

The Tile Pressed Romana Millennium, made with the same process of aging Tile Francigena Millennium, lets get coverage very pleasant, able to fit in a harmonious and without any particular architectural contrasts in every environment. The aesthetic quality of this product allows the application of each type of manufactured and for each area of application.

Test	Results	Acceptance Limits
Breaking load flexural average	3.14 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.3%	$L_T \le \pm 2.0\%$
Average straightness	0.7%	$R_L \le 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	0.8 mm 1.3 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

Pieces/square meter	(+ 10 tile)
Di /	n. 10
Weight	3.3 kg
Width	28 cm
Length	43 cm

Image colors are indicative. Weights and measurements are subjected to change.



Pressed Romana Antica Montalcino Tile

The Tile pressed Romana Antica Montalcino was created thanks to a careful game of natural colors, which reproduce the characteristics of the roof already aged with the nuances of this area, especially popular around the world. These characteristics give the coverage of the architectural charm marked by time, emphasizing the exclusivity with elegance.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	3.14 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.3%	$L_T \leq \pm 2.0\%$
Average straightness	0.7%	$R_L \le 1.5\%$
Uniformity of the transverse profile		
Maximum difference tight part	0.8 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	1.3 mm	$\Delta E_1 \leq 15.0 \text{ mm}$

Step	about 36 cm
Pieces/square meter	n. 10 (+ 10 tile)
Weight	3.3 kg
Width	28 cm
Length	43 cm

Coppo for Pressed Romana Tile



Pressed Romana Orcia Tile

The Tile Pressed Romana Orcia reproduces appearance lights, shadows and pastel colors that the passage of time determines on the clay. The aging treatment, obtained with a coloring process natural based, ensures long life and brings us inevitably to the magical atmosphere of the environment of the Val d'Orcia.

Test	Results	Acceptance Limits
Breaking load flexural average	3.14 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.06 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.3%	$L_T \leq \pm 2.0\%$
Average straightness	0.7%	$R_L \le 1.5\%$
Uniformity of the transverse profile		
Maximum difference tight part	0.8 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	1.3 mm	$\Delta E_1^{'} \leq 15.0 \text{ mm}$

Length	43 cm
Width	28 cm
Weight	3.3 kg
Pieces/square meter	n. 10 (+ 10 tile)
Step	about 36 cm

Image colors are indicative. Weights and measurements are subjected to change



Coppo for Pressed Romana Natural Red

The Coppo for Pressed Romana Natural Red is the cover member from the most simple and ancient; is still used both for renovation projects and for new buildings and is the ultimate expression of union between the past and the future in its natural color characteristic of the clays of Siena.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	5.80 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.25 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.2%	$L_T \leq \pm~2.0\%$
Average straightness	0.1%	$R_{L} \le 1.5\%$
Uniformity of the transverse profile		
Maximum difference tight part	2.9 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	3.2 mm	$\Delta E_1^{'} \leq 15.0 \text{ mm}$

Length	43 cm
Width	18 cm
Weight	2 kg
Pieces/square meter	n. 30 (assembly tile/tile)
Step	19.5 cm

Image colors are indicative. Weights and measurements are subjected to change



Coppo for Pressed Romana Crete Senesi

The Coppo Crete Senesi is characterized by a staining absolutely "ecological", a natural staining obtained by the mixture of fine clay "cooked" with an exclusive system that gives to the roofing an effect naturally shadings, typical of the secular roofing.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	5.80 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.25 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.2%	$L_T \leq \pm 2.0\%$
Average straightness	0.1%	$R_L \leq 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	2.9 mm 3.2 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

Length	43 cm
Width	18 cm
Weight	2 kg
Pieces/square meter	n. 30 (assembly tile/tile)
Step	19.5 cm

Coppo for Pressed Romana Tile



Coppo for Pressed Romana Millennium

The Coppo Millennium presents an aging obtained with special techniques and gives to the product a "lived" aspect, typical of an ancient roof, but with all the guarantees of quality provided by modern technology.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	5.80 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.25 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.2%	$L_T \le \pm 2.0\%$
Average straightness	0.1%	R _L ≤ 1.5%
Uniformity of the transverse profile		
Maximum difference tight part	2.9 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	3.2 mm	$\Delta E_1^{'} \le 15.0 \text{ mm}$

43 cm
18 cm
2 kg
n. 30 (assembly tile/tile
19.5 cm

Image colors are indicative. Weights and measurements are subjected to change.



Coppo for Pressed Romana Antica Montalcino

The Coppo for Romana Antica Montalcino was created thanks to a careful game of natural colors, which reproduce the characteristics of the roof already aged with the nuances of this area, especially popular around the world

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	5.80 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.25 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.2%	$L_T \le \pm \ 2.0\%$
Average straightness	0.1%	$R_L \leq 1.5\%$
Uniformity of the transverse profile		
Maximum difference tight part	2.9 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	3.2 mm	$\Delta E_1 \leq 15.0 \text{ mm}$

Length	43 cm
Width	18 cm
Weight	2 kg
Pieces/square meter	n. 30 (assembly tile/tile)
Step	19.5 cm

Image colors are indicative. Weights and measurements are subjected to change.



Coppo for Pressed Romana Orcia

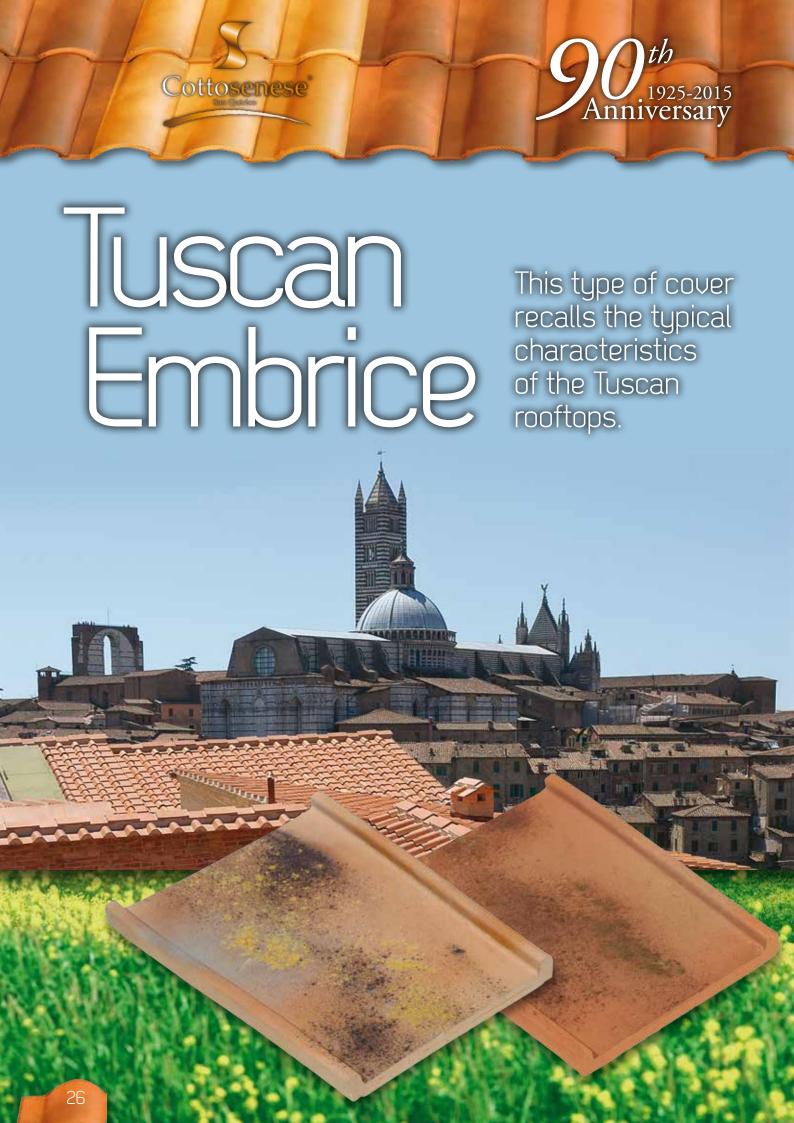
The Coppo for Roman Orcia presents a color that mimics the lights, shadows and pastel colors that the passage of time determines on the clay. The aging treatment obtained with a coloring process with a natural base, ensures durability and inevitably brings us back to the magical atmosphere of the environment of the Val d'Orcia.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	5.80 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.25 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.2%	$L_T \leq \pm 2.0\%$
Average straightness	0.1%	$R_L \le 1.5\%$
Uniformity of the transverse profile		
Maximum difference tight part	2.9 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	3.2 mm	$\Delta E_1^{'} \leq 15.0 \text{ mm}$

43 cm
18 cm
2 kg
n. 30 assembly tile/tile)
19.5 cm

 $\label{lem:lemmage} \mbox{Image colors are indicative. Weights and measurements are subjected to change.}$



Tuscan Embrice



Tuscan Embrice Natural Red

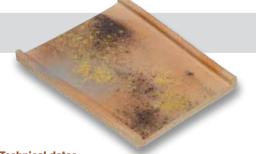
The Tuscan Embrice Natural Red is part of the new line of coppi and embrici specially designed for realized exclusive roof and roof in line with tradition. The classic color of the senese clay, combined to the irregular surface that recalls the old manual processing, make it an extremely versatile product and is particularly suitable for the construction of the roof that recall the typical characteristics of the Tuscan roof.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.9%	$L_T \le \pm 2.0\%$
Average straightness	0.3%	R _L ≤ 1.5%
Uniformity of the transverse profile		
Maximum difference tight part	1.6 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	2.4 mm	$\Delta E_1 \leq 15.0 \text{ mm}$

Length	45 cm
Width	33 cm
Weight	5 kg
Pieces/square meter	n. 8+8 little tile
Step	35.5 cm
•	

Image colors are indicative. Weights and measurements are subjected to change.



Tuscan Embrice Antica Montalcino

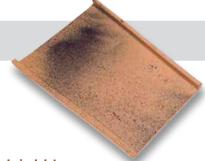
The Tuscan Antica Montalcino Embrice is a part of the new aged line version of Coppi and Embrici. Created thanks to a careful game of natural colors, which reproduce the characteristics of the roof already aged and give to the cover the charme of the architectural handwork marked by time.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.9%	$L_T \leq \pm \ 2.0\%$
Average straightness	0.3%	$R_L \le 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	1.6 mm 2.4 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

Length	45 cm
Width	33 cm
Weight	5 kg
Pieces/square meter	n. 8+8 little tile
Step	35.5 cm

Image colors are indicative. Weights and measurements are subjected to change.



Aged Tuscan Embrice

The Aged Tuscan Embrice is part of the new aged version of the coppi and embrici line realized with the use of surface indentation and oxides applied before the cooking, so as to obtain a product particularly suitable both in the construction of prestigious modern roofing, both in renovation, integrating perfectly in the replacement of roof tiles and roof tiles of the past.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.9%	$L_T \le \pm 2.0\%$
Average straightness	0.3%	$R_L \le 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	1.6 mm 2.4 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

Length	45 cm
Width	33 cm
Weight	5 kg
Pieces/square meter	n. 8+8 little tile
Step	35.5 cm

Coppo for Tuscan Embrice



Tuscan Orcia Embrice

The Tuscan Orcia Embrice is a part of the new aged line version of Coppi and Embrici. Created thanks to a careful game of natural colors, which reproduce the characteristics of the roof already aged and give to the cover the charme of the architectural handwork marked by time.

Technical datas

Test	Results	Acceptance Limits		
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$	Length	45 cm
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$	Width	33 cm
Frost resistance, method C	compliant	compliant/not compliant	Weight	5 kg
Length, average tolerance	0.9%	$L_T \le \pm 2.0\%$	Pieces/square meter	n. 8+8 little t
Average straightness	0.3%	$R_L \le 1.5\%$	Step	35.5 cm
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	1.6 mm 2.4 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$	Image colors are indicative. Weights and mea	surements are subjected to change.



Tuscan Red Natural Coppo

New line of tiles specially designed for roofs exclusive and in line with tradition. The classic color of the clay of Siena, combined with the uneven surface that recalls the old manual processing, make it an extremely versatile product and is particularly suitable for the construction of roofs that recall the typical characteristics of the Tuscan roof.

Technical datas

Test	Results	Acceptance Limits		Big tile	Little tile
Breaking load flexural average	4.90 kN	$F \ge 1.00 \text{ kN}$	Length	50 cm	45 cm
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$	Width	21.5 cm	19 cm
Frost resistance, method C	compliant	compliant/not compliant	Weight	2.9 kg	2.0 kg
Length, average tolerance	0.2%	$L_T \leq \pm 2.0\%$	Pieces/square meter	n. 20	n. 28
Average straightness	0.1%	R _L ≤ 1.5%	Step	23 cm	20.5 cm
Uniformity of the transverse profile					
Maximum difference tight part	3.3 mm	$\Delta E_{\star} \leq 15.0 \text{ mm}$			
Maximum difference large	3.5 mm	ΔE, ≤ 15.0 mm	Image colors are indicative. Weight	hts and measurements a	re subjected to change.



Tuscan Antica Montalcino Coppo

New version of Aged line tiles. They were created on this type of old lights, shadows and pastel colors determines that the time on the tiles. Brings us inevitably to atmosphere of the Val d'Orcia.

Technical datas

Test	Results	Acceptance Limits		Big tile	Little tile
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$	Length	50 cm	45 cm
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$	Width	21.5 cm	19 cm
Frost resistance, method C	compliant	compliant/not compliant	Weight	2.9 kg	2.0 kg
Length, average tolerance	0.9%	$L_T \le \pm 2.0\%$	Pieces/square meter	n. 20	n. 28
Average straightness	0.3%	R _L ≤ 1.5%	Step	23 cm	20.5 cm
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	1.6 mm 2.4 mm	ΔE ₁ ≤ 15.0 mm ΔE ₂ ≤ 15.0 mm	Image colors are indicative. Weig	yhts and measurements a	re subjected to change.

Coppo for Tuscan Embrice



Aged Tuscan Coppo

Aged Tuscan Coppo is a part of the new version of aged coppo line. They were create on this kind of aged coppo, the light the shadow and pastel color that the time determines on the roof. Inevitably bring back us to the Val d'Orcia atmosphere.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.9%	$L_T \leq \pm~2.0\%$
Average straightness	0.3%	$R_L \le 1.5\%$
Uniformity of the transverse profile Maximum difference tight part Maximum difference large	1.6 mm 2.4 mm	$\Delta E_1 \le 15.0 \text{ mm}$ $\Delta E_1 \le 15.0 \text{ mm}$

	Big tile	Little tile
Length	50 cm	45 cm
Width	21.5 cm	19 cm
Weight	2.9 kg	2.0 kg
Pieces/square meter	n. 20	n. 28
Step	23 cm	20.5 cm

Image colors are indicative. Weights and measurements are subjected to change.



Orcia Tuscan Coppo

Orcia Tuscan Coppo is a part of the new version of aged coppo line. They were create on this kind of aged coppo, the light the shadow and pastel color that the time determines on the roof. Inevitably bring back us to the Val d'Orcia atmosphere.

Technical datas

Test	Results	Acceptance Limits
Breaking load flexural average	4.20 kN	$F \ge 1.00 \text{ kN}$
Water impermeability	0.16 cm ³ cm ⁻² gg ⁻¹	$\overline{\text{IF}} \leq 0.50 \text{ cm}^3 \text{ cm}^{-2} \text{ gg}^{-1}$
Frost resistance, method C	compliant	compliant/not compliant
Length, average tolerance	0.9%	$L_T \leq \pm \ 2.0\%$
Average straightness	0.3%	$R_{L} \le 1.5\%$
Uniformity of the transverse profile		
Maximum difference tight part	1.6 mm	$\Delta E_1 \leq 15.0 \text{ mm}$
Maximum difference large	2.4 mm	$\Delta E_1 \leq 15.0 \text{ mm}$

	Big tile	Little tile
Length	50 cm	45 cm
Width	21.5 cm	19 cm
Weight	2.9 kg	2.0 kg
Pieces/square meter	n. 20	n. 28
Step	23 cm	20.5 cm



We manufacture our products to make your roof most beautiful.

Choose Cottosenese, choose the best!

We are in Tuscany, the Etruscan Tuscia and precisely in Siena in the small town of San Quirico d'Orcia, "capital" of the Val d'Orcia, in the middle of the Crete Senesi. From this geographical position the definition of "senese cooked". Always the Cottosenese has developed its products taking into account the durability and reliability of the same, so that they can appreciate the value over time, not neglecting aesthetics. Our clay roofing and our floors handmade established itself internationally as a new fashion.

To choose the best, choose Cottosenese!



Roof and Covering







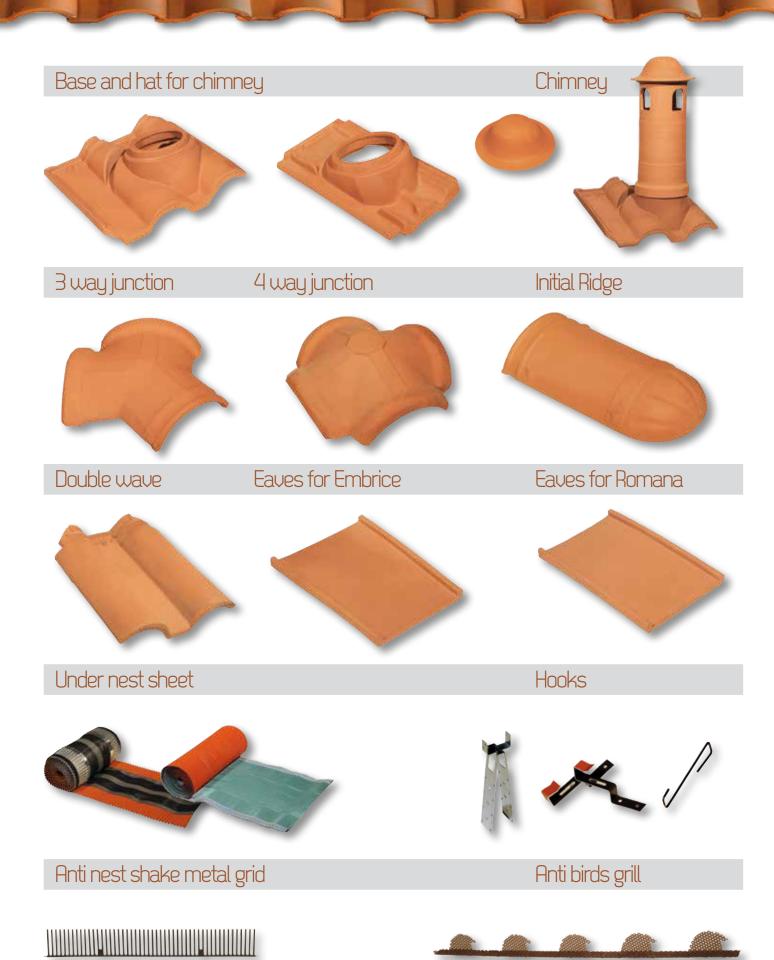




Roof and Covering Francigena Crete Senesi Francigena Gallura Francigena Millennium Francigena Orcia Francigena Sardegna Marsigliese Natural Red

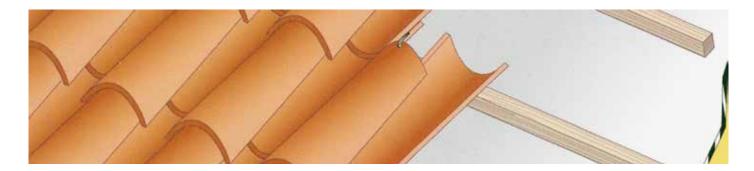
Roof and Covering Marsigliese Old Type Natural Red Marsigliese Millennium Old Type Olandese Natural Red Romana Natural Red Romana Crete Senesi Romana Millennium





Installation

At the time of installation it is appropriate to mix the colored tiles from several parcels simultaneously, to get a better uniformity of the color tone of the roof. Never use the mortar for fixing roof tiles and special pieces on the floor. This transmits, by capillarity, the moisture of the clay to the floor below and precludes any possibility of air circulation below the roof covering. Failure to comply with current regulations of installation (UNI 9460), from which they are taken our instructions, will void any warranty Cottosenese for such products.



Advice for correct installation

For millennia history has taught us to appreciate the brick in all its features, not least the ecological and environmental, confirming that the porosity of these products is the indispensable element to "breathe" better a building, allowing a natural heat exchange and, consequently, a comfortable microclimate inside the residence.

As we already know the brick tiles are not waterproof: in fact have a microporosity widespread that lets them to soak water during rain; then with the effect of weather, water and moisture evaporate restoring the natural state of the cover. It is good to clear then that the microporosity of brick, not diminish in any way the water tightness and, if anything, has positive effects for the purposes of thermal comfort.

A necessary condition for a correct installation of the cover is that it produces an effective ventilation below the roof shingles or tiles, favoring the formation of an updraft that starting from the eaves, rises through specially created spaces, up to the line ridge.

This movement of air, allows the maintenance of the same temperature on the two surfaces of the tile, thus avoiding the thermal shock, which could cause, in winter, problems of freezing to the roof and to ensure instead in summer time, an effective protection against solar radiation.

Microventilation

The proper functioning of a roofing involves placing and possibly fixing shingles and tiles on the special wooden supports (or PVC). In this way it is possible to generate a micro-ventilation under the roof covering floors that prevents moisture condensation on the inner face of the brick (the product remains so constantly dry).

Similarly it maintains the same temperature on the two surfaces of the cover, most important in the cycles of freezing and thawing. The substrates may be made of strips of wood (or plastic) with a thickness of 3-4 cm, fixed by means of nails or screws to the supporting structure below. These strips are to be positioned parallel to the eaves line of the roof and interrupted every two meters for about 4-5 cm, so as to improve the circulation of air in the undercoat.

Slopes

Normally the slope of the roofs is 30% but some special conditions may require greater gradients, as in high-altitude areas or in very windy areas.

Slopes Table

The use of the material under normal conditions is included in gradients from 25% to 40%.

- 1. laying by sealing attic
- Free-standing without the need for any type of fixing
- 3. posing with fixing the gutter line and every 3 files
- 4. posing with fixing

Installation of snowstop elements

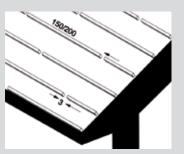
On the left, in the case of Portoghese tiles; to the right, in the case of roof tiles.



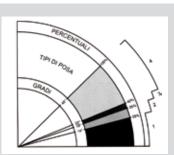














Installation

The gutter line

The eaves line represents the natural air entrance that warms in the under mantle tends to rise favoring the entry of new and cooler air, right from the eaves.

It is therefore necessary that this air has a natural outlet which will be represented by the ridge line and ventilating elements located in groundwater with suitable characteristics.

To maintain the correct inclination of the first row of shingles (or tiles) the strip in the eaves must be at least 2 cm higher than the other, since in this first row is missing the overlap with the tile below.

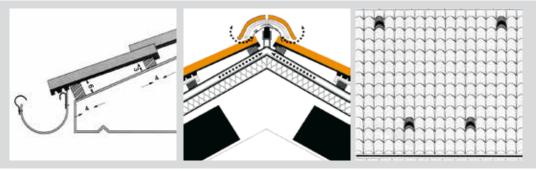
Moreover, the tile in the eaves must be mounted with an overhang of about 7-8 cm (about 1/3 the diameter of the gutter), so as to avoid returns of water in the undercoat.

It is essential to turn up the sheath waterproofing in the gutter, to prevent possible entry into the undercoat. It is the natural outlet of the air recycling of undercoat, then it is essential that it is not walled. In addition, the mortar would give all those problems for which we are widely known: porosity, fixing precarious risk of freezing, capillarity as absorbing moisture (resulting in seepage water soaked). Moreover, the different behavior of thermal expansion of the mortar compared to brick, certainly will procure of cracks in the mortar itself.

Aerators

The ridge line

To improve the air circulation in the undercoat is essential the use of aerators, one each 25 square meters of coverage, with a minimum of two elements for each stratum.



The essential requirements of a good roof

For slopes below 36% (20 °), the snow accumulates in stable layers; for gradients of more than 176% (60 °), the snow does not accumulate; for slopes of between 36% and 176% accumulates in lay.

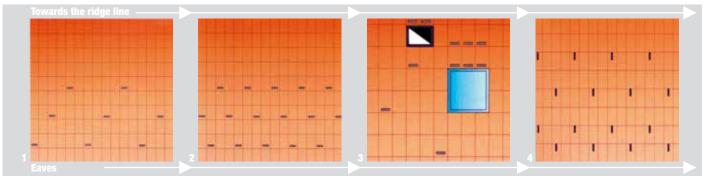
These considerations explain why, in the calculation of the accidental overloads, the legislation establishes, for slopes greater than 176%, the snow load on the roof equal to zero; at the same time, show, for the roofs of slope between 36% and 176%, the need to resort to special devices, which elements or fences snow stop arrest, to prevent the violent fall of heaps of snowers that can slide downwards.

The elements snow stop in clay, beyond the surface relief, are similar to the elements of the mantle standard. Because of the

stresses to which they are subject, all the elements snow stop, regardless of their location, should be fixed, by screws or other mechanical systems, to support battens; the hole must be properly sealed. The elements are arranged for snow stop rows parallel to the eaves line

The distances between the tiles snow stop and the distance between the parallel lines depend on the criticality of the situation (slope of the pitch, length of groundwater, surface finish of the elements of the mantle - whether smooth or rough -, climate zone, altitude, exposure ...) . A further element of assessment is given by the presence on the flap of interruption or penetrations. In this case the tiles snow stop will be positioned upstream of the same.

Examples of schemes of arrangement of elements snow stop in case of groundwater gradient between 30-35% and length around 6 mt.



- Fig.1 For sites altitude less than 750 mt. slm
 (an element snow stop every 5 standard elements on three staggered rows in the vicinity of the eaves).
 For sites in altitude between 750 and 1200 meters. slm
 (an element every 2 standard elements, always three rows).
- Fig.2 For sites in altitude between 750 and 1200 meters. Slm (an element every 2 standard elements, always three rows).
- Fig.3 Example of arrangement of tiles in snow stop protection of solutions of continuity and penetrations. For the calculation of snow load must pay particular attention to the roof channels and areas where snow can form dangerous accumulations.
- Fig.4 Schematic Location of snow stop.









Via Fornaci, 55/a 53027 San Quirico d'Orcia (SI) Phone 0039 0577 897 510 Fax 0039 0577 898 029 www.cottosenese.net

