RENOLIT

Rely on it.

TECHNICAL CATALOGUE

LIGHT COVERINGS

ENGLISH

2019

Coextrusion: how our material is manufactured

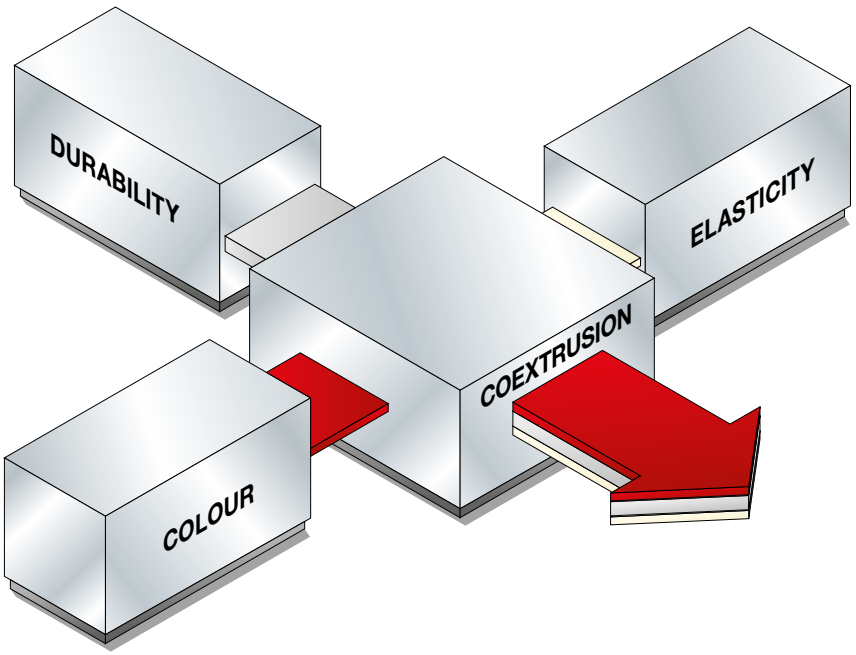
In 1992 IMAC S.P.A. invented and patented Polimglass®, a layered material produced with a "coextrusion" process, with which it became internationally renown for the production of roofing sheets and gutter systems.

TECNO IMAC S.P.A., created with the acquisition of the former IMAC in 1999, has further developed this technology, improving its performance and aesthetics over the years. The availability of new technical polymers has subsequently allowed further developments and the creation of new materials, always based on a three-layered "coextrusion" process; for example Ecotres®, the material used to make ECOLINA® and GRECOLINA® sheets and all their accessories, as well as HSP® (High Strength Polymer), used to create the new range of IMACROOF® sheets.

All these materials share a common production process that, with different chemical formulations in the various layers, consists in the process of conveying different types of thermoplastic materials prepared in three different extruders into a single extrusion head. The result is a single sheet that is extruded in three different layers, each of which has specific features designed to perform certain functions:

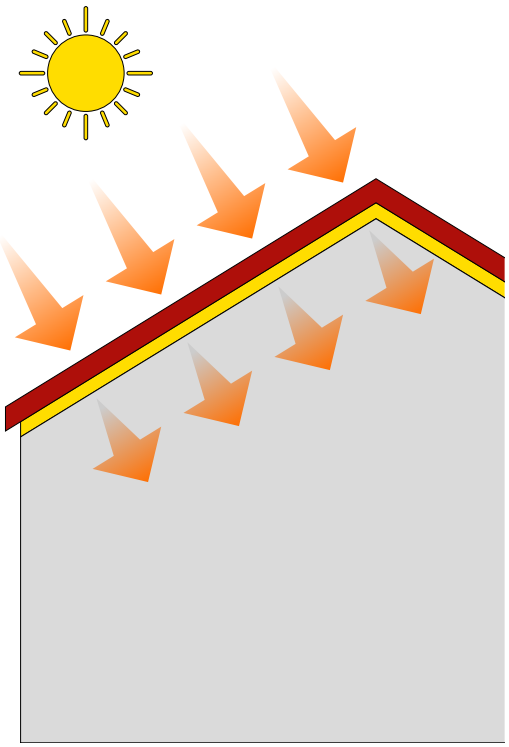
- **top layer:** tinted in the mass PMMA (Methacrylate), to obtain colours and perfect finishes that are highly UV and chemical resistant, with outstanding weatherability.
- **middle layer:** mixture of different technical polymers with a micronized inert charge to obtain low thermal expansion, a good acoustic behaviour and a good bendability.
- **bottom layer:** thermoplastic compounds for a maximum impact strength and chemical resistance.

The result of this particular combination of thermoplastic materials is a roofing or cladding that can be used in the most difficult environments for industrial and agricultural buildings (resistant to acid fumes and salt climates).



What is the difference between ventilation and micro-ventilation

A roof is considered "ventilated" when it allows overheated air below the roof to get out from its highest part, which is protected by a "ventilated ridge". The difference between "ventilation" and "micro-ventilation" is only in the quantity of air that can be evacuated from the ridge and depends on the ventilation gap and shape, the opening surface on the gutter line and ventilated ridge and also on the roof length and its slope. It should be noted that the flap's slope is very important for ventilation: the greater the pitch, the more the upward movement of hot air is accentuated.



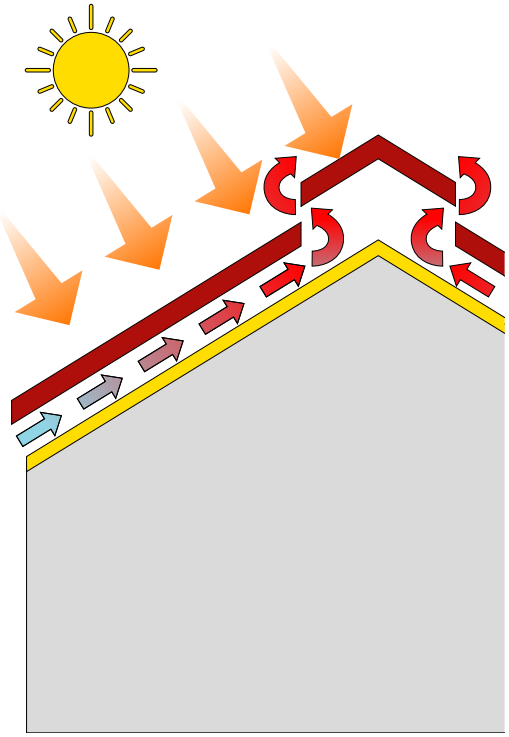
To ensure sufficient ventilation for a long roof with a low slope, it is necessary to increase the volume of air between the roofing sheet and the surface below, whether insulated or single skin.

How does it work?

The cool air coming from the opening on the gutter line heats up in the space below the roofing exposed to direct sunlight. For this reason it becomes lighter and moves upwards, escaping from the openings of the ventilated ridge.

What is it for?

In the summer months, it helps to quickly eliminate the heat accumulated by the roofing and prevents it from being transmitted to the structures of the building and then to the space below. Insulating panels' performance is also optimised with ventilation. Without ventilation they only delay, but do not prevent heat transmission. In colder months it prevents condensation in the roofing, as well as mould and humidity. For this reason, the use of bituminous roofing membranes is not recommended under the roofing. Breathable roofing membranes are much more suitable.



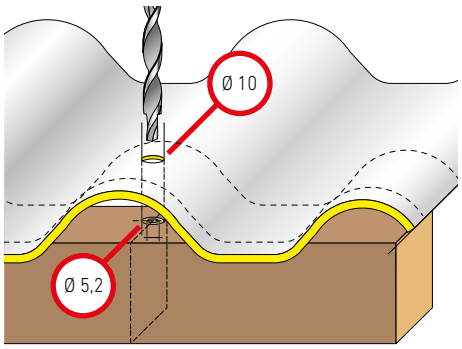
Why use coextruded Tecno Imac coextruded products?

Polimglass®, Ecotres® and HSP® are thermoplastic materials that are suitable for use in a temperatures range from - 30°C to +80°C. So that the roofing does not exceed + 80°C, ventilation underneath the sheets and therefore adequate openings on the gutter line and on the ridge is required. Even if a temperature of +80°C may appear very high, our tests and installers' feedbacks have shown that a sheet wether in metal or in plastic can reach or even exceed +100°C if it is installed without any ventilation. This is why installation drawings in this book must be respected.

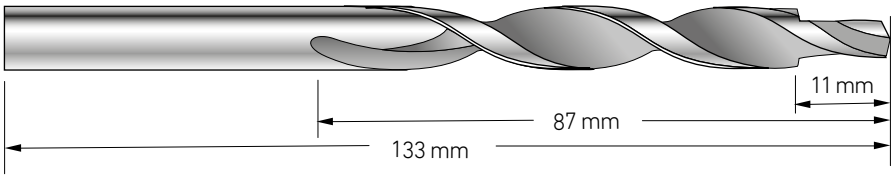
Sheet drilling and cutting

Drilling

In order to allow the sheets' normal linear thermal expansion, it is necessary to drill the sheets at the fixing points, a first hole with a 5.2 mm diameter up to the supporting structure, and then widen the hole on the sheet with a 10 mm diameter drill.



Ø 10 & Ø 5,2 mm



Please note that the widely available Ø 5.2 mm drills are too short for iCoppo, 30Coppi and laRomana sheets.

With RENOLIT Tecno Imac's special long drills with dual diameter, it is possible to drill the support and the sheet in one single operation. The drilling is performed from the top down perpendicular to the sheet's surface.

We strongly advise against fixing directly the sheets without drilling them first because it would make the sheet expansion impossible.

Original RENOLIT Tecno Imac fasteners must always be used. Fixing in the sheet trough with a simple washer and rubber seal is only possible for cladding applications.

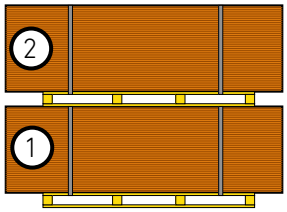
Cutting

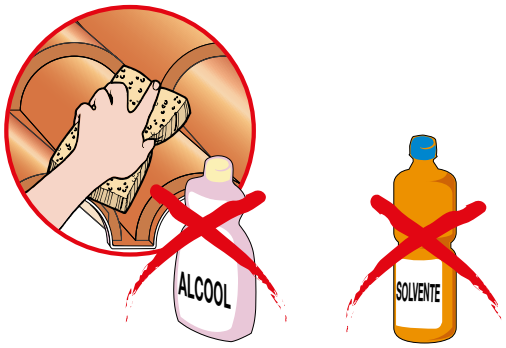
We recommend the use of sharp tools. It is important that the sheet is well supported during cutting operations, to avoid shocks and vibrations that may damage the sheets. See the recommendations below:

tool	teeth dimension (mm)	blade speed (m/min)
bandsaw (for metal)	2	1200
circular saw (for metal)	2 - 3	3000
Widia-toothed circular saw	10	3000 - 5000
diamond disc saw (for ceramic)	GR 44 - 60	3000
hand hacksaw (for light metal)	2 - 3	-
jigsaw (for light metal)	2 - 3	moderate
angle grinder (flexible disk)	-	moderate

Storage and cleaning

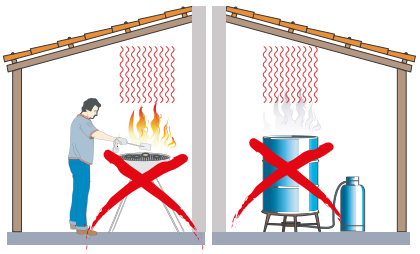
To minimize storage space, 2 standard pallets with 70 sheets each can be stacked without exceeding 140 sheets. The sheets must not be stored directly on the floor in a warehouse even more so not directly on the ground in a worksite. They must be packed on wooden pallets spaced 1 meter apart max.
If outside, pallets should be slightly tilted (5% pitch) to drain rainwater by creating an incline of 5%; please note that the bubble wrap and stretch film around the package must also be removed.
We recommend the use of a forklift for handling.





Sheets cleaning
Only water and neutral detergents should be used to clean the sheets.

Warning!! Do not use alcohol or solvents!

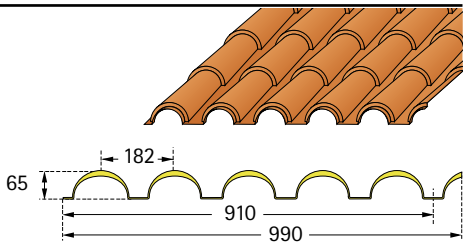


Warnings
The sheets should not be installed next to a high heat source (flames, embers) to avoid altering irreversibly the sheets characteristics.

The Sheets

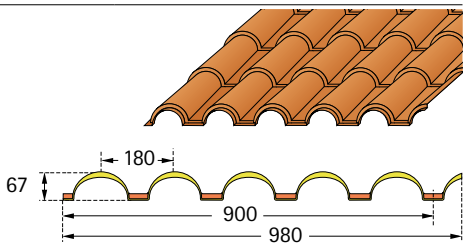
iCoppo

tiled sheets in HSP®
standard sheet length: 2090 mm
length from 1313 to 7221 mm
total width: 990 mm • thickness 1.8/2 mm
• Surface: Satin / Colour: Terracotta
• Surface: Mat / Colour: Terracotta and Antique



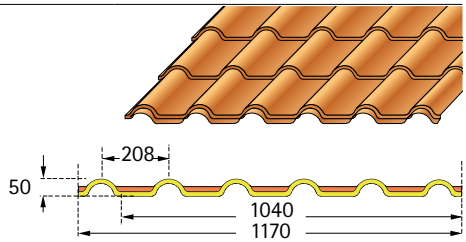
30Coppi

tiled sheets in HSP®
standard sheet length: 1840 mm
total width: 980 mm • thickness 2 mm
• Surface: Mat / Colour: Terracotta and Antique



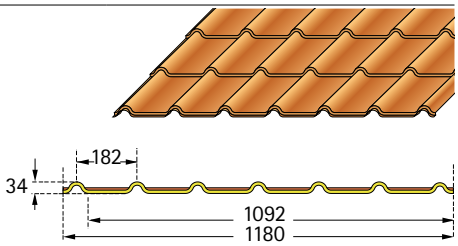
laRomana

Roman-style tiled sheets in HSP®
standard sheet length: 1840 mm
total width: 1170 mm • thickness 1.8 mm
• Surface: Satin / Colour: Terracotta
• Surface: Mat / Colour: Terracotta



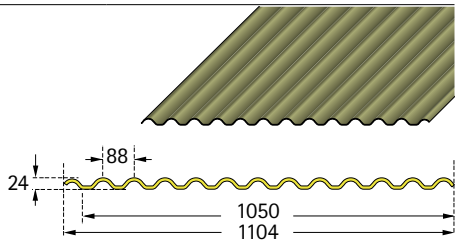
laFrancese

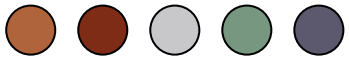
French-style tiled sheets in HSP®
standard sheet length: 1840 mm
total width: 1180 mm • thickness 1.8 mm
• Surface: Glossy / Colour: Terracotta and Slate



ecolina

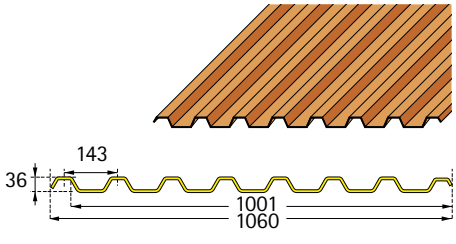
corrugated sheet in Ecotres®
standard sheet length: 2000 / 3000 / 4000 / 5000 / 6000 mm
total width: 1104 mm • thickness 1.8 mm
• Surface: Glossy / Colour: Terracotta, Siena red, grey , grey-green, slate

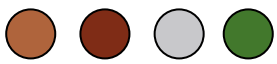




grecolina

trapezoidal sheet pitch 143 mm in Ecotres®
standard sheet length: 2000 / 3000 / 4000 / 5000 / 6000 mm
total width: 1060 mm • thickness 1.8 mm
• Surface: Glossy / Colour: Terracotta, Siena red, grey , Green





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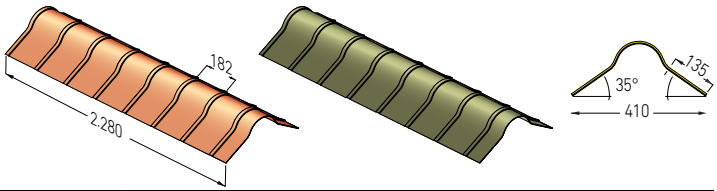
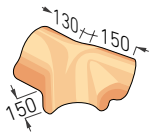
Special parts and accessories

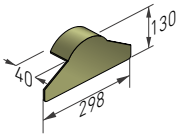
multipurpose ridge cap in HSP and Ecotres



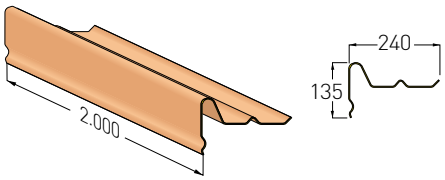
three-way connection



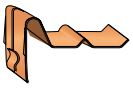
end part for ridge



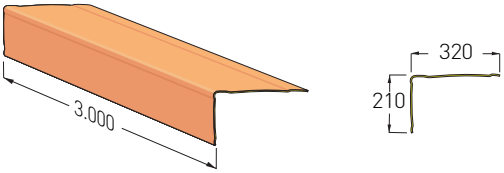
polimglass front plate



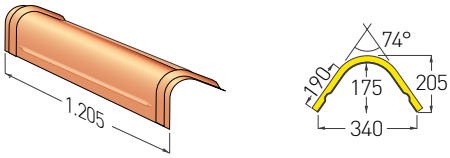
connection for front plate



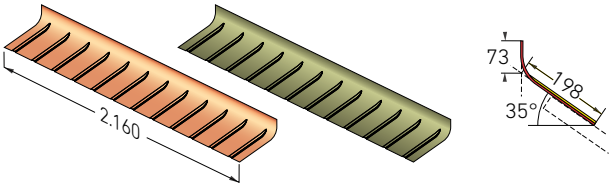
polimglass corner flashing cap



polimglass multished ridge



wall flashing in HSP and Ecotres

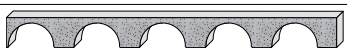
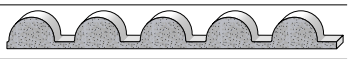
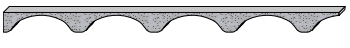
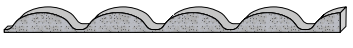
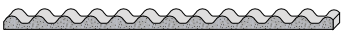
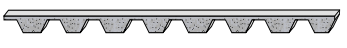
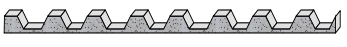


parapasseri
PVC bird comb, 500 mm piece

polimcoll
polyurethane mono-component mastic

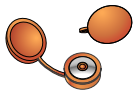
sigilcop
soft and adhesive butylene seal, roll 7 x 7000 mm

proair®
Foam fillers and counter foam fillers made of highly breathable, reticulated, flexible, foamed polyurethane

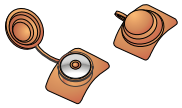
Counter foam filler overcoppo / overcoppo 30coppi	
Foam filler sottocoppo / overcoppo 30coppi	
Counter foam filler displuvio (iCoppo and 30Coppi)	
Foam filler compluvio (iCoppo and 30Coppi)	
Foam filler lower (ecolina) lower	
Counter foam filler (ecolina) upper	
Counter foam filler sottogreca (grecolina)	
Foam filler overgreca (grecolina sheets)	

Fixing accessories

imafix, sealing cap with metal washer



ecolfix, sealing cap with metal washer and saddle

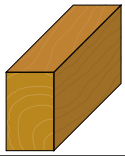
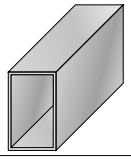


grecafix, sealing cap with metal washer grecolina and saddle

step drill, with dual diameter (Ø 10 and Ø 5.2 mm) - total length 133 mm, useful length 87 mm

galvanised and cemented or stainless steel screws
see our price list for availability

Types of screws

support	type of sheet	type of screw	dimensions (mm)
	iCoppo / 30Coppi	self-tapping for wood	6.5 x 100
	laRomana / Grecolina	self-tapping for wood	6.5 x 80
	laFrancese / Ecolina	universal self-drilling	6.5 x 60
	iCoppo / 30Coppi	self-tapping for metal	6.3 x 90
	laRomana / Grecolina	self-tapping for metal	6.3 x 70
	laFrancese / Ecolina	universal self-drilling	6.5 x 60

Number of fixings per m^2 of sheet

sheet	length (mm)	width (mm)	supports per sheet	fixings / m^2
ecolina	2000	1104	4	5.4
grecolina	2000	1060	3	4.5
grecolina	2000	1060	4	5.9
iCoppo	2000	990	3	3.7
30Coppi	1840	980	3	4.7
laRomana	1840	1170	3	3.9
laFrancese	1840	1180	3	4.1

Note: the number of fixings are calculated for a classic roofing of approx. 40/45 m^2

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Distance between supports

Please note: All data are certified by ISTEDIL.
The load tests were carried out at room temperature and with an evenly distributed load (snow). In making the calculation of the snow load, the relevant regional parameters must be taken into consideration.

iCoppo

distributed load with several supports

ISTEDIL test report	axel base of the supports	safety load (coeff. = 2)	breakage load
0805/2016	850 mm	316 kg/m²	632 kg/m²
0305/2018*	900* mm	134,5* kg/m²	261* kg/m²

30Coppi

distributed load with several supports

ISTEDIL test report	axel base of the supports	safety load (coeff. = 2)	breakage load
0586/2014 - B	820 mm	217 kg/m²	434 kg/m²

laRomana

distributed load with several supports

ISTEDIL test report	axel base of the supports	safety load (coeff. = 2)	breakage load
0586/2014 - A	850 mm	127 kg/m²	254 kg/m²

laFrancese

distributed load with several supports

ISTEDIL test report	axel base of the supports	safety load (coeff. = 2)	breakage load
0586/2014	850 mm	101 kg/m²	202 kg/m²

Ecolina

distributed load with several supports

ISTEDIL test report	axel base of the supports	safety load (coeff. = 2)	breakage load
0941/2012	700 mm	236 kg/m²	473 kg/m²

Grecolina

distributed load with several supports

ISTEDIL test report	axel base of the supports	safety load (coeff. = 2)	breakage load
1153/2014-A	700 mm	435.5 kg/m²	871 kg/m²
1153/2014	900 mm	267.5 kg/m²	535 kg/m²

* iCoppo venezia semigloss, thickness 1.8 mm

Safety and warranty

This guide is intended to give precise information about assembling RENOLIT Tecno Imac products. Under all circumstances, the contractor laying the materials is required to strictly comply with the rules and legislation in force.
All **RENOLIT** Tecno Imac sheets are covered by warranty. This warranty, however, is subject to full compliance with the assembly instructions in this manual. In particular:

the use of the sheets with an axel base greater than the maximum provided for in our table would result in the immediate cancellation of the warranty;

the use of different fixing accessories, not explicitly authorised by RENOLIT Tecno Imac, or the improper use of the sheets will also result in immediate cancellation of the warranty;

failure to observe the indications regarding ventilation and micro-ventilation of the roof (as indicated on page 3) will result in immediate cancellation of the warranty.

iCoppo®

Antique

Terracotta

Venezia - satin

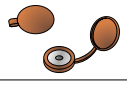
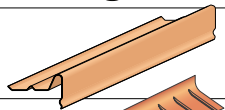
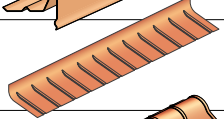
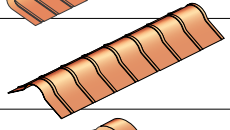
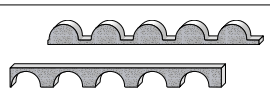
Technical data

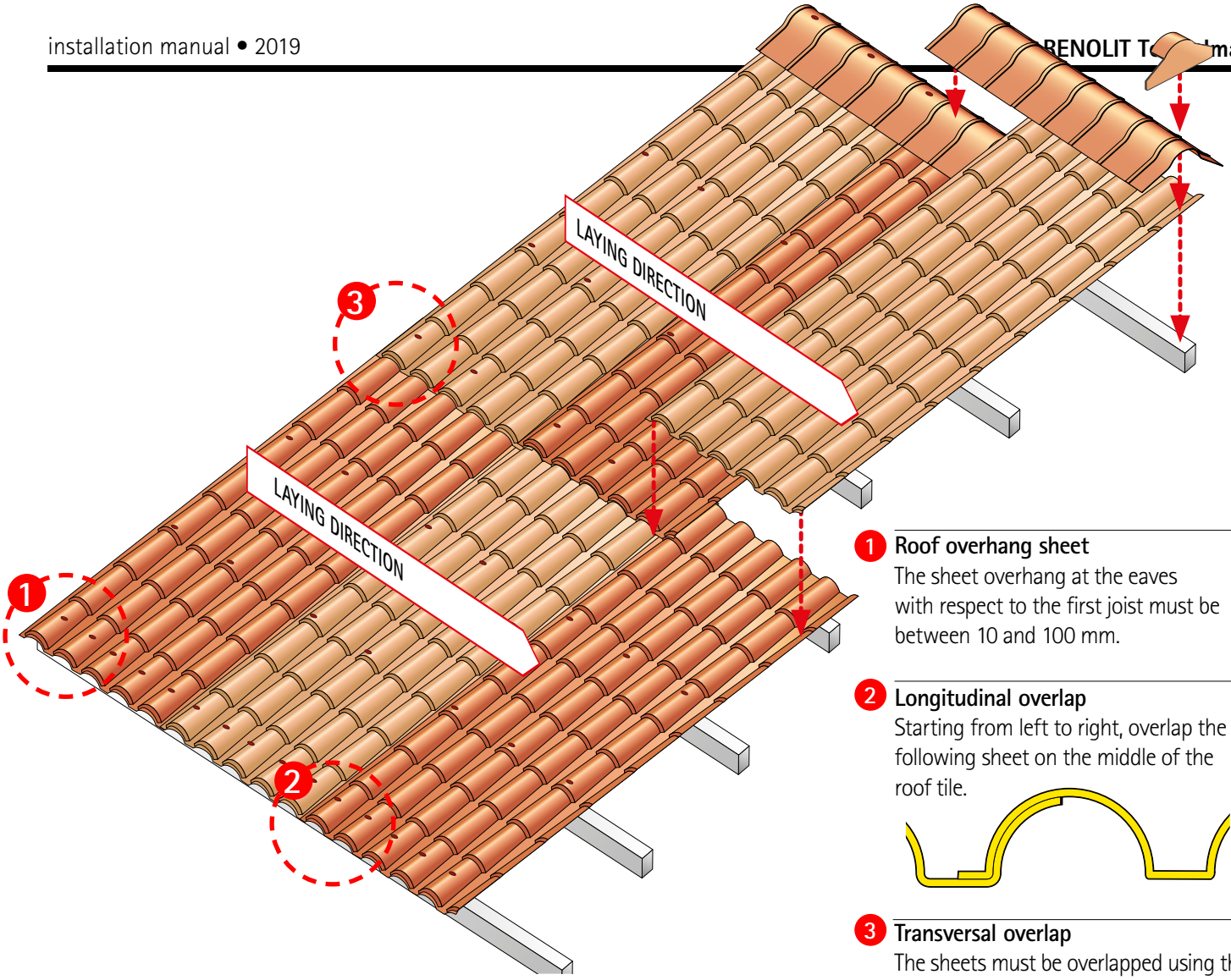
Length	mm	from 1313 to 7220*
Standard length**	mm	2090
Width	mm	990
Useful width	mm	910
Average thickness	mm	2.00 / 1.80**
Average weight	kg/m^2	4.50 / 3.90**
Coefficient of thermal expansion	°C^{-1}	3.99x10^{-5}
Thermal transmittance coefficient U	W/m^2 K	4,68
Breaking strength	kg/m^2	632 / 269**

* Maximum length for Antique surface is 5251 mm
** Data for sheets iCoppo Venezia, Satin surface

Please note:
the values listed in the table are intended with a tolerance equal to:
> length: -0 /+20 mm
> weight: +/- 5%

Special parts and accessories

Imafix	sealing cap with metal washer for iCoppo sheets	
Front plate in polimglass®	front plate thickness 3 mm / length 2000 mm	
Multipurpose ridge cap in HSP®	wall flashing thickness 2.0 mm / length 2160 mm	
Multipurpose ridge in HSP®	multipurpose ridge cap thickness 2.0 mm / length 2280 mm	
End part	end part for multipurpose ridge cap	
Proair overcoppo / sottocoppo length 1980 mm	foam filler and counter foam filler in highly breathable, reticulated, flexible, foamed polyurethane	



1 Roof overhang sheet

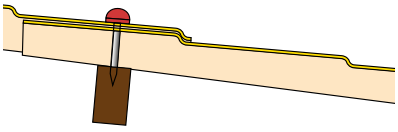
The sheet overhang at the eaves with respect to the first joist must be between 10 and 100 mm.

2 Longitudinal overlap

Starting from left to right, overlap the following sheet on the middle of the roof tile.

3 Transversal overlap

The sheets must be overlapped using the final element (depth 70 mm) and they must always be on a support.



The sheets must be fixed on a minimum of three supports. The spacing between supports must be proportional to loads and the roof slope (see table on page 9).

Place the first sheet with the stamped-marking side facing towards the sky. After it has been properly aligned, fix the first tile to the support structure.

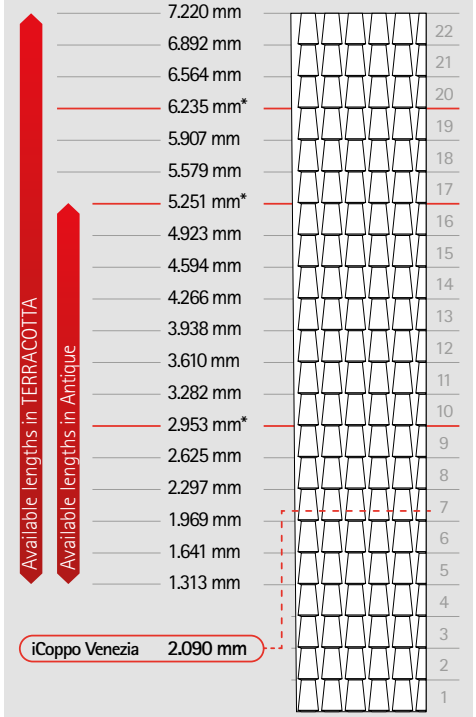
Warning: In order to allow normal thermal expansion of the sheets, a 10 mm pre-drilling must be done for a 6.5mm diameter screw.

Then proceed with longitudinal overlap. Fix the sheet on the first lowest tile which corresponds to the overlap. To keep the correct alignment of the fixing we recommend the use of a line of reference fixed to both ends of the rafter
Use the same method up to the last sheet.

Warning: the transversal overlap must always be on a support.

If necessary, the last sheet's width can be modified by cutting it with an abrasive disc. At this point, complete the fixings according to the scheme (at least three fixings on each sheet for each joist, on all tiles on the lower edge).

Available lengths



30**Coppi**

Antique

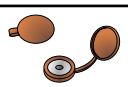
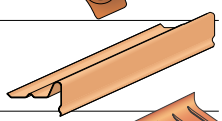
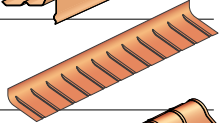
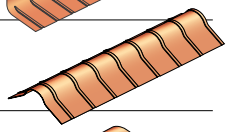
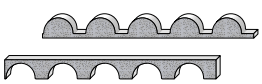
Terracotta

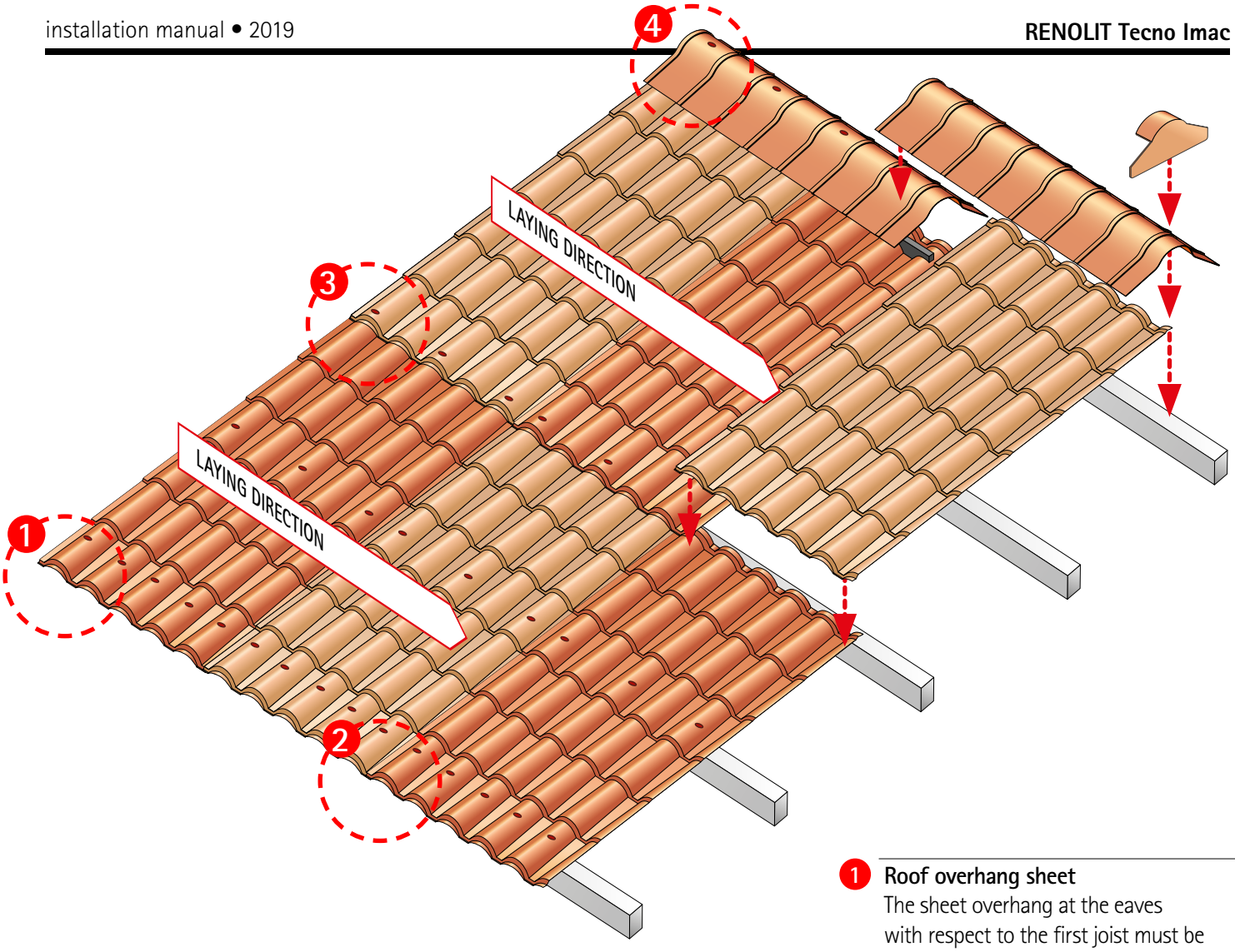
Technical data

Standard length	mm	1840
Width	mm	980
Useful width	mm	900
Average thickness	mm	2.00
Average weight	kg/m^2	4.30
Thermal expansion coefficient	°C^{-1}	3.99x10^{-5}
Thermal transmittance coefficient U	W/m^2 K	4.68
Breaking strength	kg/m^2	434

Please note:
the values listed in the table are intended with a tolerance equal to:
> length: -0 /+20 mm
> weight: +/- 5%

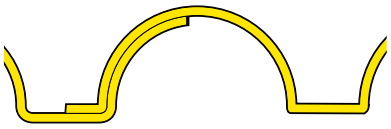
Special pieces and accessories

Imafix	sealing cap with metal washer for 30Coppi sheets	
Ecolfix	sealing cap with metal washer and saddle for 30Coppi sheets and multi-function ridge	
Front plate in polimglass®	front plate in polimglass thickness 3 mm / length 2000 mm	
Wall flashing in HSP®	wall flashing thickness 2.0 mm / length 2160 mm	
Multipurpose ridge HSP®	multipurpose ridge cap thickness 2.0 mm / length 2280 mm	
End part	end part for multipurpose ridge cap	
Proair overcoppo / sottocoppo length 1980 mm	oam filler and counter foam filler in highly breathable, reticulated, flexible, foamed polyurethane	

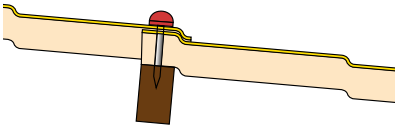


1 Roof overhang sheet
The sheet overhang at the eaves with respect to the first joist must be between 10 and 100 mm.

2 Longitudinal overlap
Starting from left to right, overlap the following sheet on the middle of the roof tile.



3 Transversal overlap
The sheets must be overlapped using the final element (depth 70 mm) and they must always be on a support.



4 Fixing the ridge
To allow normal thermal expansion of the flaps, the ridge must be fixed to the support center and while avoiding the ribs.

The sheets must be fixed on a minimum of three supports. The spacing between supports must be proportional to loads and the roof slope (see table on page 9).

Place the first sheet with the stamped-marking side facing towards the sky. After it has been properly aligned, fix the first tile to the support structure.

Warning: In order to allow normal thermal expansion of the sheets, a 10 mm pre-drilling must be done for a 6.5mm diameter screw.

Then proceed with longitudinal overlap. Fix the sheet on the first lowest tile which corresponds to the overlap. To keep the correct alignment of the fixing we recommend the use of a line of reference fixed to both ends of the rafter
Use the same method up to the last sheet.

Warning: the transversal overlap must always be on a support.

If necessary, the last sheet's width can be modified by cutting it with an abrasive disc. At this point, complete the fixings according to the scheme (at least three fixings on each sheet for each joist, on all tiles on the lower edge).

laRomana

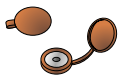
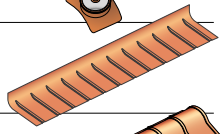
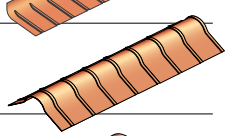
Terracotta

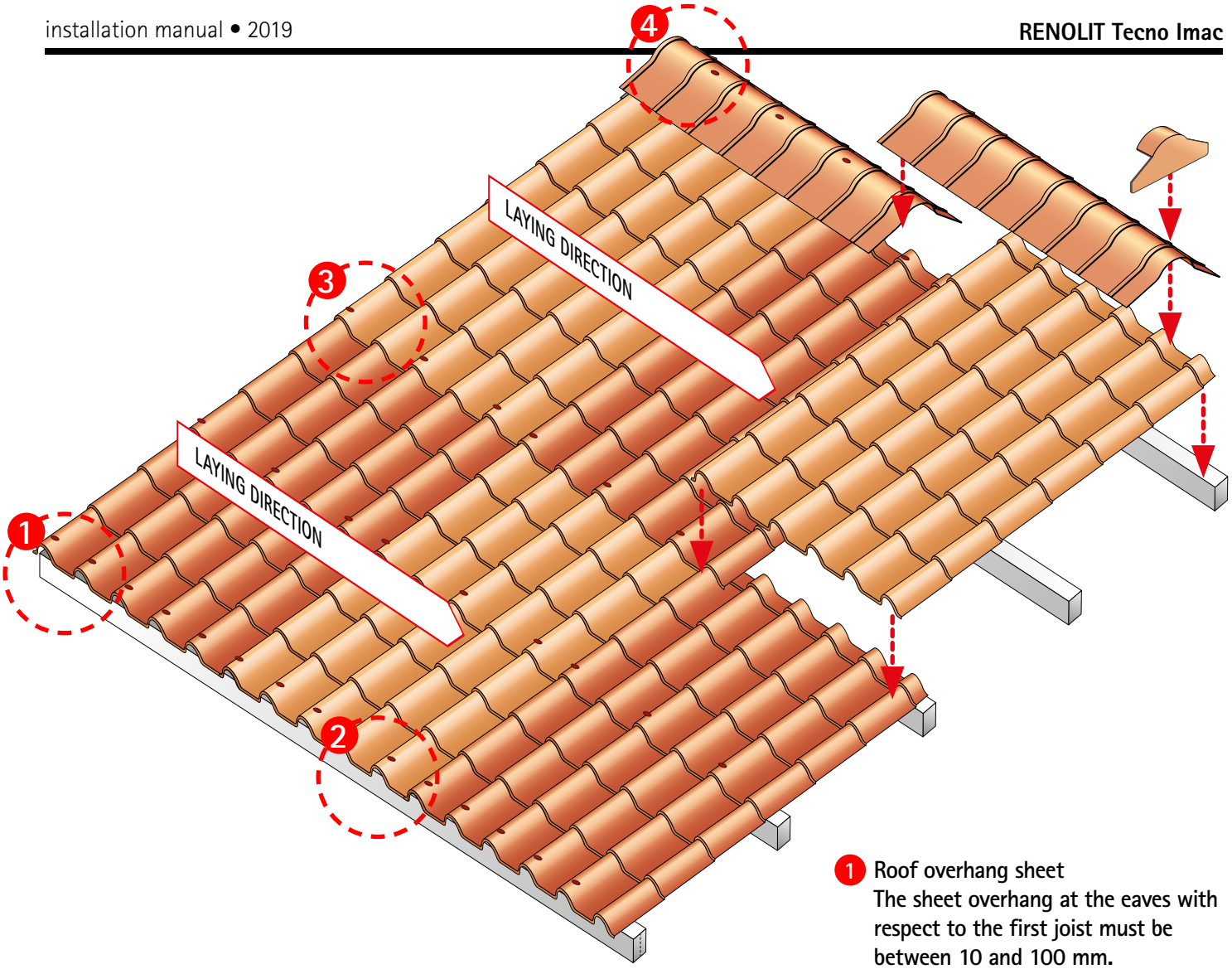
Technical data

Standard length	mm	1840
Width	mm	1170
Useful width	mm	1040
Average thickness	mm	1,80
Average weight	kg/m^2	3,50
Thermal expansion coefficient	°C^{-1}	3.99x10^{-5}
Thermal transmittance coefficient U	W/m^2 K	4.68
Breaking strength	kg/m^2	254

Please note:
the values listed in the table are intended with a tolerance equal to:
> length: -0 /+20 mm
> weight: +/- 5%

Special pieces and accessories

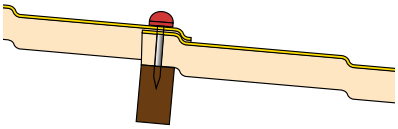
Imafix	sealing cap with metal washer for laRomana sheets	
Ecolfix	sealing cap with metal washer and saddle for laRomana sheets and multpurpose ridge	
Wall flashing in HSP®	wall flashing thickness 2.0 mm / length 2160 mm	
Multipurpose ridge in HSP®	multipurpose ridge cap thickness 2.0 mm / length 2280 mm	
End part	end part for multipurpose ridge cap	



1 Roof overhang sheet
The sheet overhang at the eaves with respect to the first joist must be between 10 and 100 mm.

2 Longitudinal overlap
Starting from the left to the right, overlap each tile on the previous one.

3 Transversal overlap
The sheets must be overlapped using the final element (depth 70 mm) and they must always be on a support.



4 Fixing the ridge
To allow normal thermal expansion of the flaps, the ridge must be fixed to the support center and while avoiding the ribs.

The sheets must be fixed on a minimum of three supports. The spacing between supports must be proportional to loads and the roof slope (see table on page 9).

Place the first sheet with the stamped-marking side facing towards the sky. After it has been properly aligned, fix the first tile to the support structure.

Warning: In order to allow normal thermal expansion of the sheets, a 10 mm pre-drilling must be done for a 6.5mm diameter screw.

Then proceed with longitudinal overlap. Fix the sheet on the first lowest tile which corresponds to the overlap. To keep the correct alignment of the fixing we recommend the use of a line of reference fixed to both ends of the rafter
Use the same method up to the last sheet.

Warning: the transversal overlap must always be on a support.

If necessary, the last sheet's width can be modified by cutting it with an abrasive disc. At this point, complete the fixings according to the scheme (at least three fixings on each sheet for each joist, on all tiles on the lower edge).

laFrancese

Slate

Terracotta

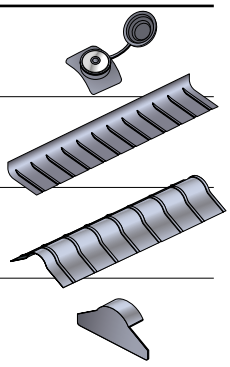
Technical data

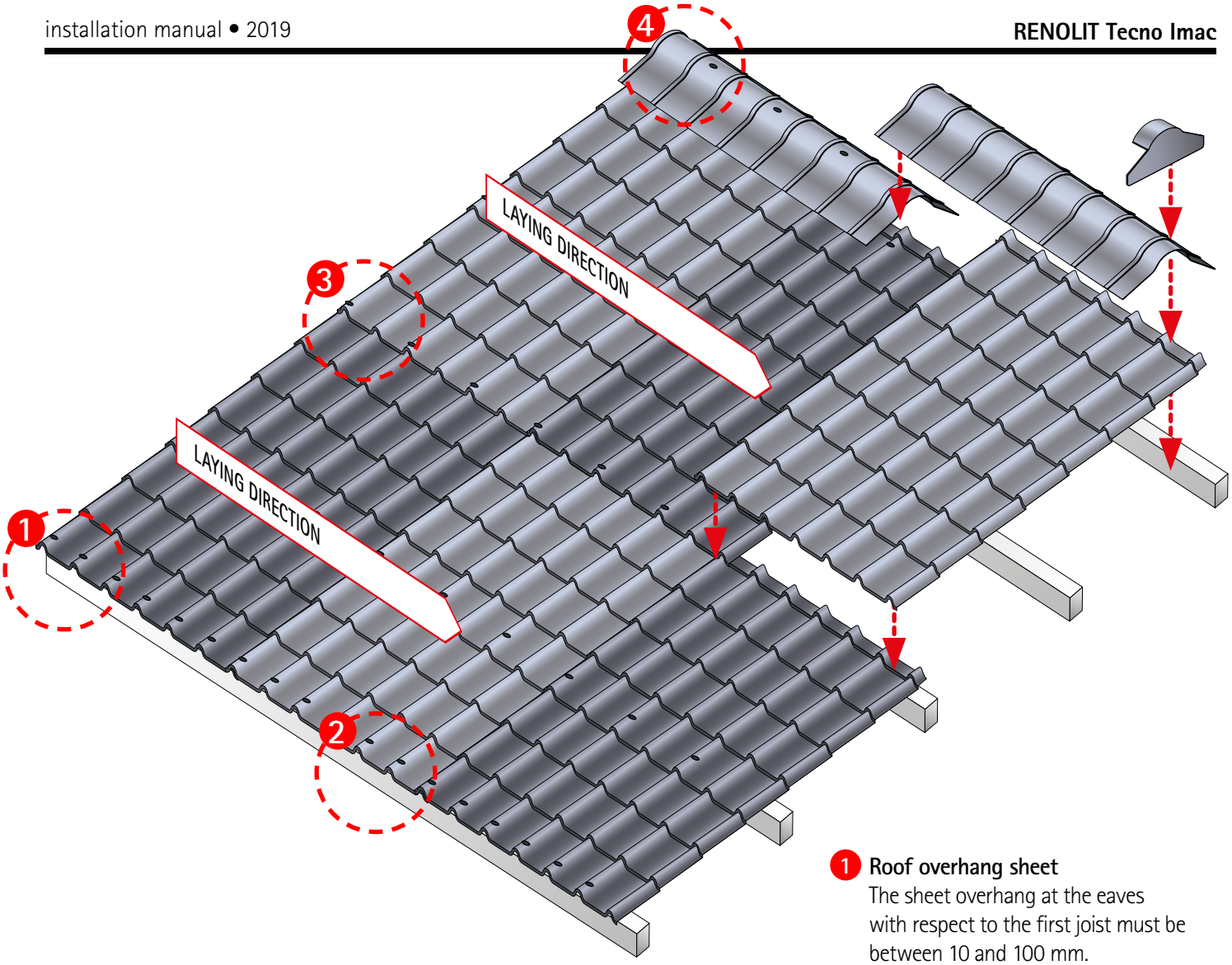
Standard length	mm	1840
Width	mm	1180
Useful width	mm	1092
Average thickness	mm	1.80
Average weight	kg/m^2	3.50
Thermal expansion coefficient	°C^{-1}	3.99x10^{-5}
Thermal transmittance coefficient U	W/m^2 K	4.68
Breaking strength	kg/m^2	202

Please Note:
the values listed in the table are intended with a tolerance equal to:
> length: -0 /+20 mm
> weight: +/- 5%

Special pieces and accessories

Ecolfix	sealing cap with metal washer and saddle for laFrancese sheets and multipurpose ridge
Wall flashing in HSP®	wall flashing thickness 2.0 mm / length 2160 mm
Multipurpose ridge in HSP®	multipurpose ridge cap thickness 2.0 mm / length 2280 mm
End part	end part for multipurpose ridge cap

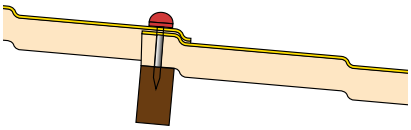




1 Roof overhang sheet
The sheet overhang at the eaves with respect to the first joist must be between 10 and 100 mm.

2 Longitudinal overlap
Starting from the left to the right, overlap each tile on the previous one.

3 Transversal overlap
The sheets must be overlapped using the final element (depth 70 mm) and they must always be on a support.



4 Fixing the ridge
To allow normal thermal expansion of the flaps, the ridge must be fixed to the support center and while avoiding the ribs.

The sheets must be fixed on a minimum of three supports. The spacing between supports must be proportional to loads and the roof slope (see table on page 9).

Place the first sheet with the stamped-marking side facing towards the sky. After it has been properly aligned, fix the first tile to the support structure.

Warning: In order to allow normal thermal expansion of the sheets, a 10 mm pre-drilling must be done for a 6.5mm diameter screw.

Then proceed with longitudinal overlap. Fix the sheet on the first lowest tile which corresponds to the overlap. To keep the correct alignment of the fixing we recommend the use of a line of reference fixed to both ends of the rafter
Use the same method up to the last sheet.

Warning: the transversal overlap must always be on a support.

If necessary, the last sheet's width can be modified by cutting it with an abrasive disc. At this point, complete the fixings according to the scheme (at least three fixings on each sheet for each support, on all tiles on the lower edge).

ecolina® by tecno imac

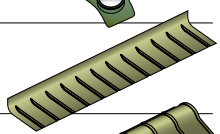
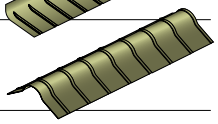
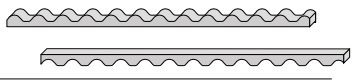
Terracotta
Grey
Slate
Siena red
Grey-green

Technical data

Lengths	m	2 / 3 / 4 / 5 / 6
Width	mm	1104
Working width	mm	1050
Average thickness	mm	1.80
Average weight	kg/m^2	3.60
Thermal expansion coefficient	°C^{-1}	3.99x10^{-5}
Thermal transmittance coefficient U	W/m^2 K	4.68
Breaking strength	kg/m^2	473

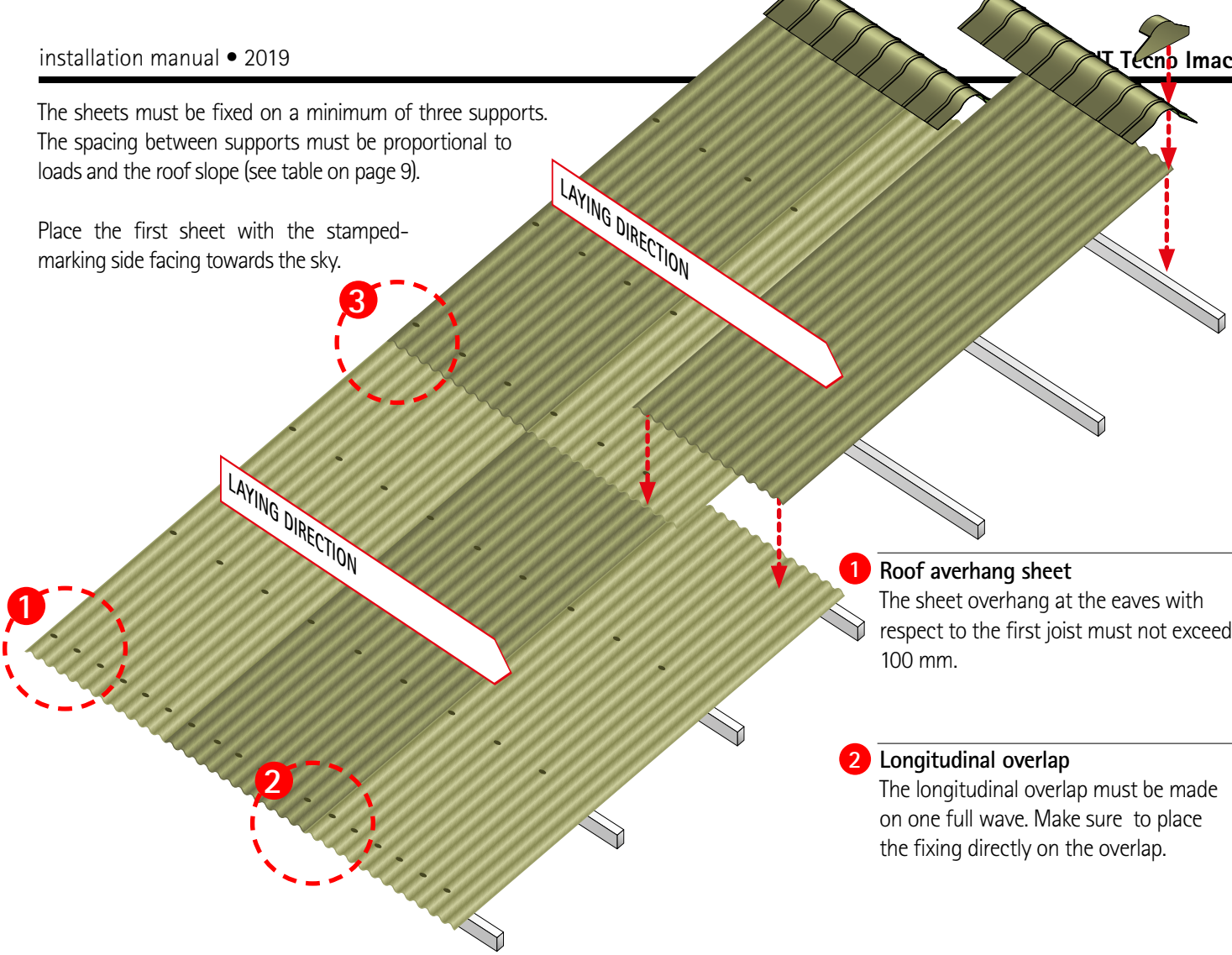
Please note:
the values listed in the table are intended with a tolerance equal to:
> length: -0 /+20 mm
> weight: +/- 5%

Special pieces and accessories

Ecolfix	sealing cap with metal washer and saddle for Ecolina sheets and accessories	
Wall flashing in HSP®	wall flashing thickness 2.0 mm / length 2160 mm	
Multipurpose ridge in HSP®	multipurpose ridge cap thickness 2.0 mm / length 2280 mm	
End part	end part for multipurpose ridge cap	
Proair overcoppo / sottocoppo length 1980 mm	foam filler and counter foam filler in highly breathable, reticulated, flexible, foamed polyurethane	

The sheets must be fixed on a minimum of three supports. The spacing between supports must be proportional to loads and the roof slope (see table on page 9).

Place the first sheet with the stamped-marking side facing towards the sky.



1 Roof averhang sheet
The sheet overhang at the eaves with respect to the first joist must not exceed 100 mm.

2 Longitudinal overlap
The longitudinal overlap must be made on one full wave. Make sure to place the fixing directly on the overlap.

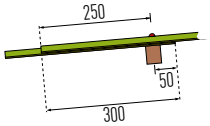
After it has been properly aligned, fix the first tile to the support structure.

Warning: In order to allow normal thermal expansion of the sheets, a 10 mm pre-drilling must be done for a 6.5mm diameter screw.

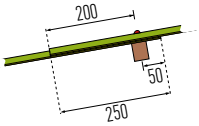
Then proceed with longitudinal overlap. Fix the sheet on the first lowest tile which corresponds to the overlap. To keep the correct alignment of the fixing we recommend the use of a line of reference fixed to both ends of the rafter
Use the same method up to the last sheet.

If necessary, the last sheet's width can be modified by cutting it with an abrasive disc. At this point, complete the fixings according to the scheme (at least three fixings on each sheet for each support, on all tiles on the lower edge).

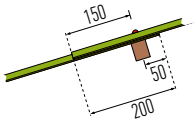
3 Transversal overlap
The transversal overlap must ALWAYS be supported by a joist by superimposing the two sheets as per the following table:



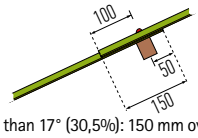
slope between 5° (8,7%) and 6° (10,5%): 300 mm overlap



slope between de 6° (10,5%) and 9° (15,8%): 250 mm overlap



slope between de 9° (15,8%) and 17° (30,5%): 200 mm overlap



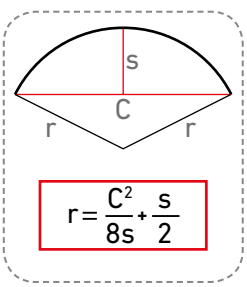
slope greater than 17° (30,5%): 150 mm overlap

Sheet bendability

The Ecolina sheets are flexible and bendable, with a minimum bending radius of 4 m.

Warning!! Due to the low slope, any transversal overlaps must be of 300 mm minimum from the axe of fixing (total overlap 350 mm).

If the bending radius is not known, please refer to the following formula.



grecolina® by tecno imac

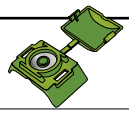
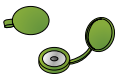
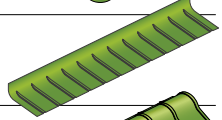
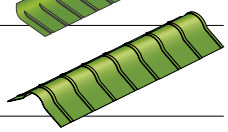
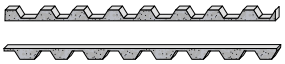
Siena red
Grey
Terracotta
Green

Technical data

Lengths	m	2 / 3 / 4 / 5 / 6
Width	mm	1060
Useful width	mm	1001
Average thickness	mm	1.80
Average weight	kg/m^2	3.90
Thermal expansion coefficient	°C^{-1}	3.99x10^{-5}
Thermal transmittance coefficient U	W/m^2 K	4.68
Breaking strength	kg/m^2	871

Please note:
the values listed in the table are intended with a tolerance equal to:
> length: -0 /+20 mm
> weight: +/- 5%

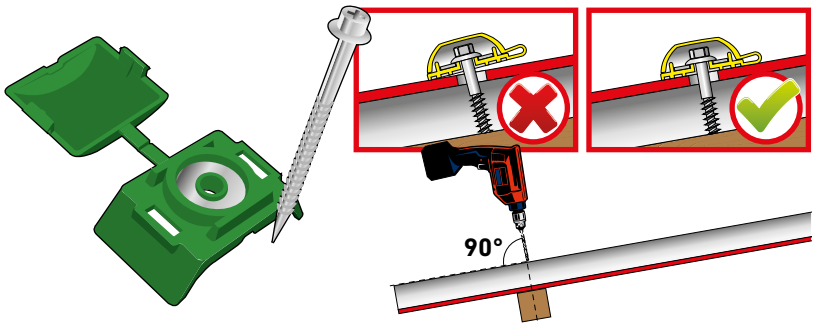
Special pieces and accessories

Ecolfix	sealing cap with metal washer and saddle for Grecolina sheets	
Imafix	sealing cap with metal washer	
Wall flashing in HSP®	wall flashing thickness 2.0 mm / length 2160 mm	
Multipurpose ridge in HSP®	multipurpose ridge cap thickness 2.0 mm / length 2280 mm	
End part	end part for multipurpose ridge cap	
Proair overcoppo / sottocoppo length 1980 mm	foam filler and counter foam filler in highly breathable, reticulated, flexible, foamed polyurethane	

Grecafix fastening

To fix the sheets, original Grecafix fastening must be used. Grecafix system allows absolutely waterproof fixings.
For proper operation, only RENOLIT Tecno Imac screws must be used.

Caution: the drill must be perpendicular to the sheet.

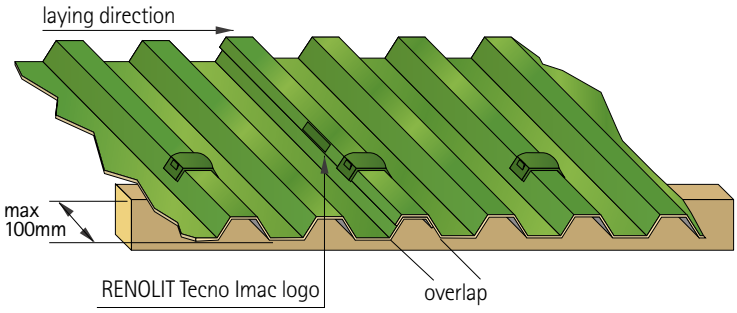


Grecolina sheet overlap

The Grecolina sheets overlap must be of one full rib.

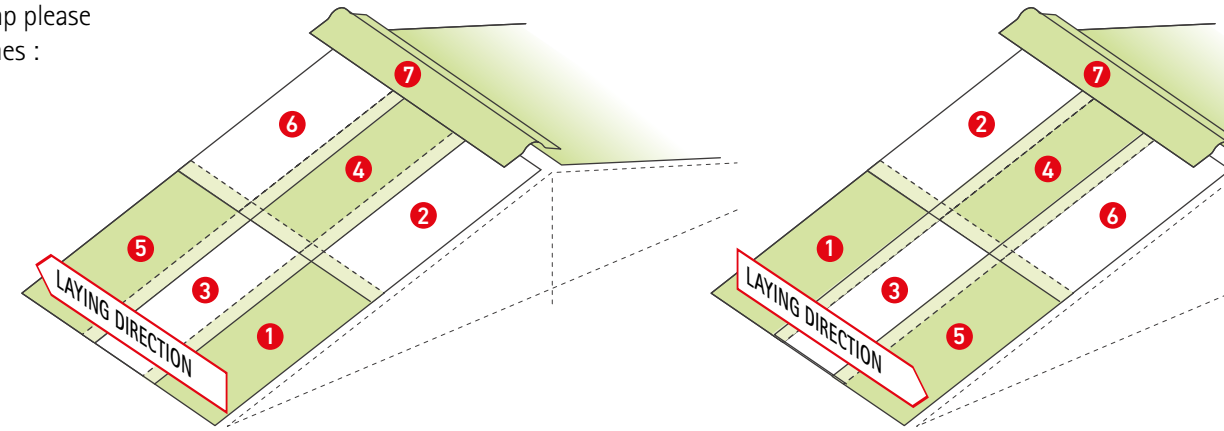
Warning: the rib to be overlapped is slightly narrower and lower than the others.

RENOLIT Tecno Imac is printed on the last rib of the top sheet. This marking must always be visible because positioned on the top wave.



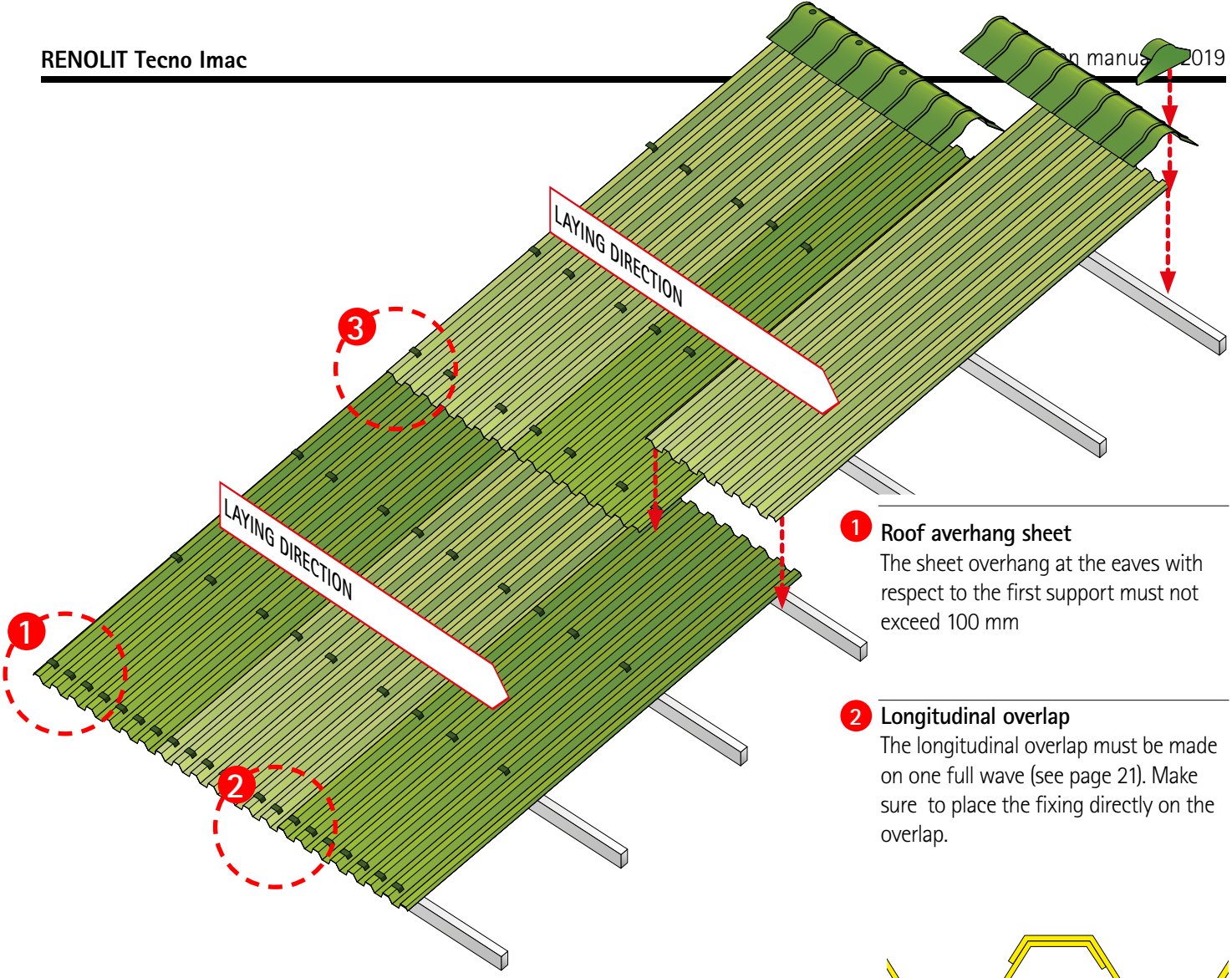
Laying scheme

In case of transversall overlap please refer to the following schemes :



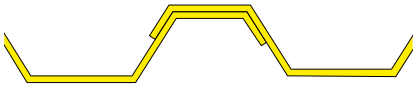
Fastening number

The number of fixings for a complete roof depends on the surface and configuration (see next page for a classic laying scheme). As a guideline, expect to use four to five fixings per m^2.



1 Roof averhang sheet
The sheet overhang at the eaves with respect to the first support must not exceed 100 mm

2 Longitudinal overlap
The longitudinal overlap must be made on one full wave (see page 21). Make sure to place the fixing directly on the overlap.



3 Transversal overlap
The transversal overlap must ALWAYS be on a suppport by superimposing the two sheets as per the following table :

The spacing between supports must be proportional to loads and the roof slope (see table on page 9).

Place the first sheet with the stamped-marking side facing towards the sky.

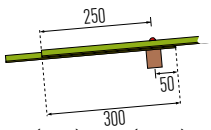
After it has been properly aligned, fix the first wave to the support structure.

Warning: In order to allow normal thermal expansion of the sheets, a 10 mm pre-drilling must be done for a 6.5mm diameter screw.

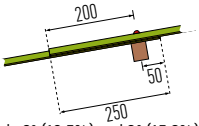
Then proceede with longitudinal overlap. Fix the sheet on the first lowest wave which corresponds to the overlap. To keep the correct alignment of the fixing we recommend the use of a line of reference fixed to both ends of the support.

Use the same method up to the last sheet.

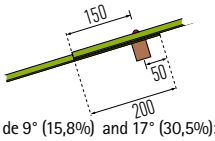
If necessary, the last sheet's width can be modified by cutting it with an abrasive disc. At this point, complete the fixings according to the scheme (at least four fixings on each sheet for each support, on all waves on the lower edge)



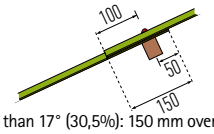
slope between 5° (8,7%) and 6° (10,5%): 300 mm overlap



slope between de 6° (10,5%) and 9° (15,8%): 250 mm overlap



slope between de 9° (15,8%) and 17° (30,5%): 200 mm overlap



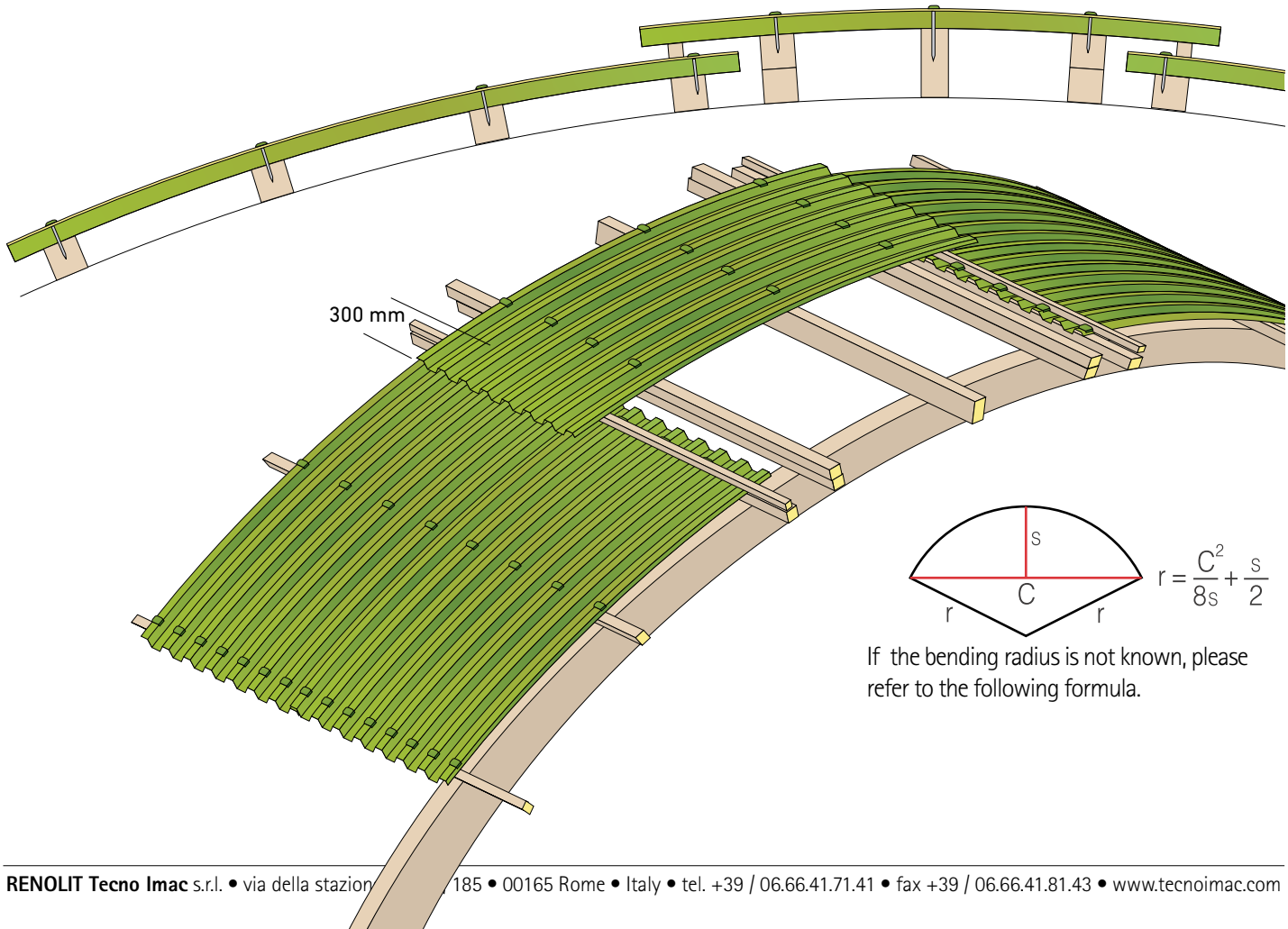
slope greater than 17° (30,5%): 150 mm overlap

Mounting on curved surfaces

The Ecolina sheets are flexible and bendable, with a minimum bending radius of 6 m. On a long curve (see our example) a Grecolina sheet can be used as ridge, respecting the ventilation instructions.
The mounting procedure is as follows:

1. Firstly, double the strips at the penultimate fixing line.
2. Beginning from the bottom, fix the sheets with screws and grecafix , curving them one by one, until the penultimate purline before the ridge line.
3. Using grecafix fastenings, make the final fixing line at the double strips, on the upward strip.
4. Position a spacer strip by screwing it on the lower one.
5. Once the two spacer strips (on both side) have been laid, place the ridge's sheet and fix it to the ridge line and on the spacer strip.

Warning!!
Due to the low slope, any transversal overlaps must be of 300 mm minimum from the axe of fixing (total overlap 350 mm)

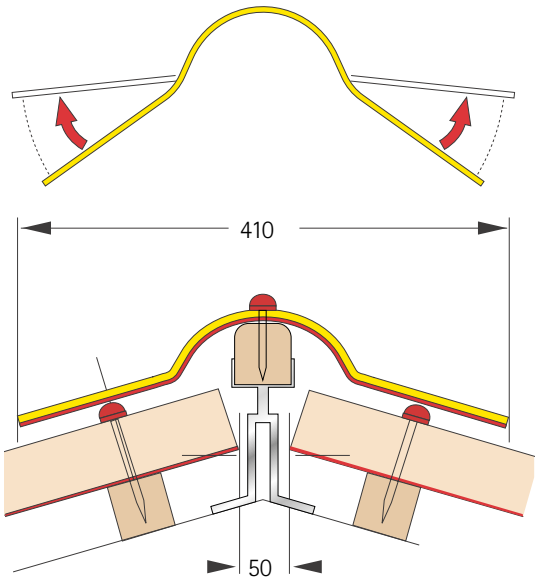


$$r = \frac{C^2}{8S} + \frac{S}{2}$$

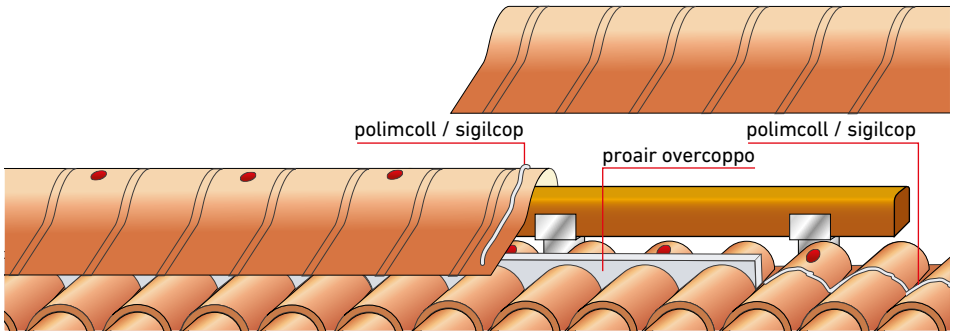
If the bending radius is not known, please refer to the following formula.

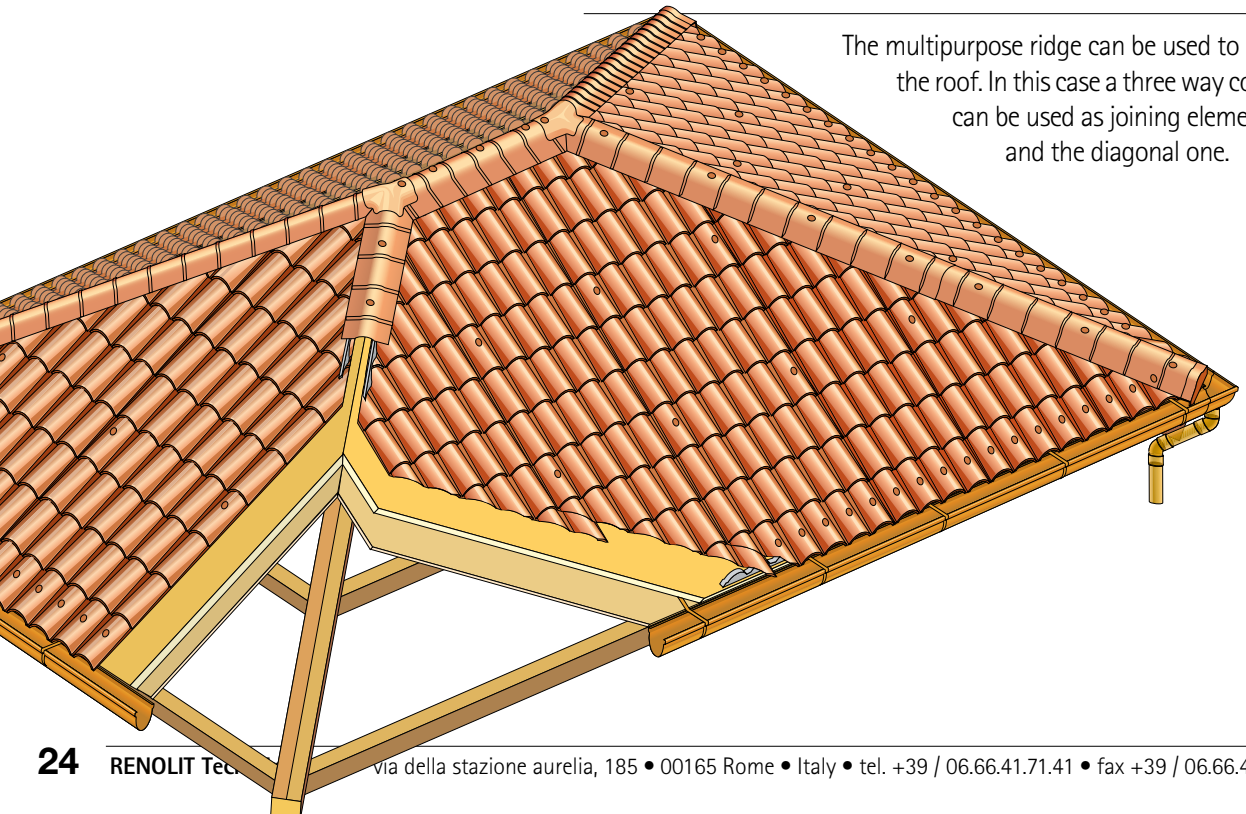
Special parts

The multipurpose ridge cap and the three-way connection



The large elasticity of multipurpose ridge's allows its use on various slopes from a minimum gradient of 3° to a maximum of 35°.
Before placing the ridge, it is advisable to position proair ventilated foam filler near the expected fixing line.
Then place the multipurpose ridge and begin fixing it at the top, using self-drilling/tapping screws and imafix or ecolfix.
Make sure not to fix the ridge near the edge in order to avoid water infiltration problems.
To allow normal thermal expansion of the parts, adjacent ridges must be fixed separately.
In the case of low slopes, below 20%(11.3°), another sealing line must be placed upward the proairseal especially in the internal channel of the tile, using sigilcop or polimcoll sealant.

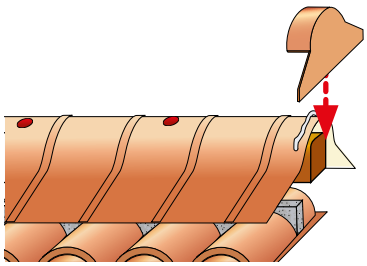




The multipurpose ridge can be used to connect the four pitches of the roof. In this case a three way connection molded in PMMA can be used as joining element between the linear ridge and the diagonal one.

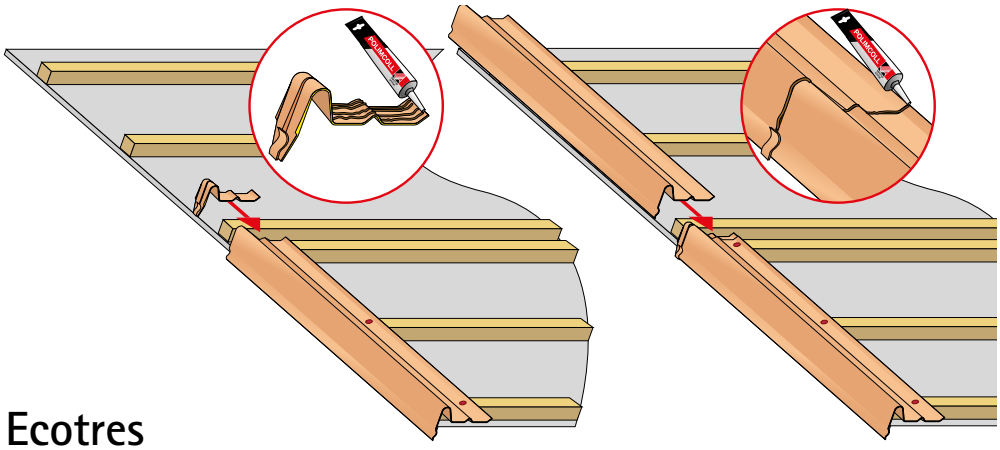
End part for ridge

When the ridge fixing is fisnished, install the end part to the multipurpose ridge with polimcoll.



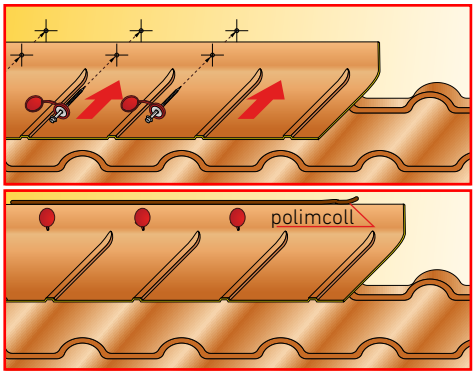
polimglass® front plate

The Polimglass Front Plate is one element of the side of the covering's finishing, and is compatible with iCoppo and 30Coppi sheets.
The assembly of a covering begins above all with the fixing of the front plate with **Imafix** in the innermost channel to prevent infiltration.
Particular care must be taken when positioning the front plate, making sure that the first and the last tile of the sheets cover the internal channel without interfering.
If one front plate is not enough to cover the entire flap's edge, the connection of the front plates must be done with the special Polimglass connections for front plates. For proper, infiltration-free assembly, proceed by fixing the most downward front plate, paying attention not to fix it too close to the connection. Continue by laying two polimcoll curbs on each side of the connection and inserting them to the already fixed front plate. Then insert them into the most upward front plate and proceed with fixing it.
It is important to secure the two front plates near the connection, and it is therefore best to have wooden strips located underneath these points. Finally, a further polimcoll curb at the contact point of the two front plates will make the connection perfectly waterproof.



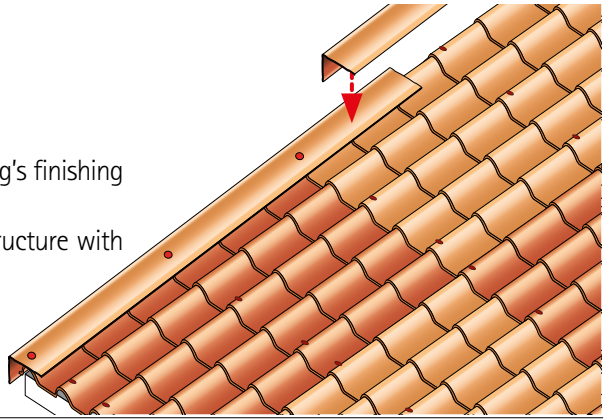
Wall flashing in HSP and Ecotres

The wall flashing is the connecting element between the vertical wall and the roofing layer. It is available in the same finishes and is thus compatible with all the RENOLIT Tecno Imac sheets.
Assembly is performed by fixing the wall flashing to the wall with Imafix or dowels. In this way, the wall flashing is isolated from the roofing sheets, allowing free expansion.
Once the wall flashing is fixed to the wall, the upper side of the strip must be sealed with polimcoll.



corner flashing cap

The Corner flashing cap in Polimglass is one element of the side of the covering's finishing and is compatible with all the RENOLIT Tecno Imac sheets.
The corner flashing cap is assembled after the sheets, fixing it to the main structure with Imafix.
The corner flashing cap in Polimglass can be overlapped.











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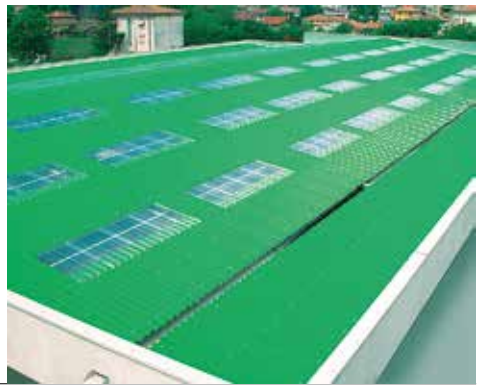

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