TECHNICAL MANUAL

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Description

ROOFLITE® is a type of extruded sheet made of compact corrugated polycarbonate. The shape of the corrugation allows coupling with metal sections.
ROOFLITE® sheets guarantee high resistance against impact, they are extremely light and they have a high light transmission.
ROOFLITE® sheets are the ideal products for manufacturing industrial roofings, greenhouses, canopies, etc.

This manual outlines the main features and instructions for mounting ROOFLITE® polycarbonate sheets.

For further information or comments please write to:

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1. Polycarbonate general features

Polycarbonate is a thermoplastic polymer having excellent mechanical and physical properties. Due to its adaptability and durability, polycarbonates are used for example for manufacturing CDs and DVDs. In addition, its resistance against impacts makes of polycarbonates an ideal material for use in automotive, aeronautical and ballistic (airplane windows, automobile lights, anti-riot shields and helmets, etc) industry. All these characteristics, alongside the high transparency, make polycarbonates suitable for application in the building industry.

✓ Polycarbonate technical data.

		Value	Unit	Standard
Mechanical properties				
Tensile/yield strength σ_y		>60	N/mm^2	DIN 53455
Tensile/breaking strength σ_r		>70	N/mm^2	DIN 53455
Yield strain ε_y		6	%	DIN 53455
Strain at break ε_r		>100	%	DIN 53455
Tensile elastic modulus E		2300	N/mm^2	DIN 53457
Resistance to impact a_n	+23°C	65	kJ/m^2	DIN 53453
	-40°C	65	kJ/m^2	DIN 53453
Impact strength a_k a +23°C		35	kJ/m^2	DIN 53453
Resistance Izod with indent		>700	J/m	ASTM 256-56
Brinnel hardness H_{30}		110	N/mm^2	DIN 53456
Physical properties				
Specific weight		1.2	g/m^3	DIN 53479
Refractive index n_D		1.58	n^o	DIN 53491
water absorption by immersion		0.36	%	DIN 53495
Permeability to water vapour (0.1mm)		15	g/m^2 d	DIN 53122
Thermal properties				
linear thermal expansion α		0.065	mm/m°C	DIN 53752
Thermal conductivity λ		0.20	W/m K	DIN 52612
VICAT softening temperature		145-150	°C	DIN 53460
Typical values of polycarbonate material				

✓ Comparison with other products.

Compared to other plastic materials commonly used in the building industry and glass, polycarbonate is superior in many ways.

	U.M.	PC	PMMA	PVC	PET	GRP	Vetro
Density	g/m^2 d	1.20	1.19	1.38	1.33	1.42	4.70
Impact strength	KJ/m^2	70	2	4	3	1.2	-
Elastic modulus	N/mm^2	2200	3100	3200	2450	6000	70000
Linear thermal expansion	1/°C	6.5×10^{-5}	7.0×10^{-5}	6.7×10^{-5}	5.0×10^{-5}	3.2×10^{-5}	0.9×10^{-5}
Thermal conductivity	W/m K	0.20	0.18	0.13	0.24	0.15	1.3
Maximum temperature of use	°C	120°	90°	60°	80°	140°	240°
Transparency to UV rays	%	4	40			19	80
Fire behaviour		Optimal	inflammable	inflammable	inflammable	inflammable	fireproof
Resistance to ageing		Good	Optimal	poor	poor	good	excellent
Compatibility with chemical agents		Good	Good	poor	good	good	optimal

2. Sections

ROOFLITE® sheets are available in various shapes, thicknesses and colours. Sections and their characteristics are described in detail in the annexes.

3. UV protection

ROOFLITE® sheets are protected on the outer side with a layer of UV absorber that prevent the sheets against ageing, thus granting their durability over the time. The protected side, which must be installed externally, is distinguished by the mark indicating “UV side” and by the lot number.

4. ROOFLITE® EXTRALIFE (with protection on both sides)

ROOFLITE® sheets can be supplied upon request with the UV protection on both sides. Such versions are subject to limitations and minimum quantities. Please contact our offices for further information.

5. ROOFLITE® with MIN DEW AND MIN DRIP treatment

ROOFLITE® sheets can be supplied, upon request, with an anti-condensation treatment applied on the inner surface. Application of the MIN DEW and MIN DRIP treatment is ideal for applications in greenhouses and swimming pools as it prevents the formation of water droplets inside the structure.

6. Warranty

ROOFLITE® sheets are covered by a warranty against ageing for a period of 10 years. Warranty terms and conditions include loss of lighting and variation of the yellow index. Please contact our sales offices for exact terms and conditions.

7. Light transmission

ROOFLITE® sheets offer maximum light transmission allowing to exploit the entrance of light to the maximum. ROOFLITE® sheets offer a complete range of colours that allow proper dosage of light and offer advanced solutions if it is necessary to reduce the passage of solar energy, such as the “ROOFLITE ATHERMIC” sheets.

Colour	Light transmission			
	0.8 mm	1.0 mm	1.1 mm	1.2 mm
Crystal (0010)	89	89	89	89
Opal (0037)	80	75	75	75
Opal (9011)	2	2	2	2
Smoky grey (0024)	60	55	55	55

8. Fire behaviour

ROOFLITE sheets maintain the optimal properties of fire reaction of polycarbonate material. We have available various certifications valid in several countries. For further information, please contact our sales offices.

9. Thermal conductivity

Polycarbonate thermal conductivity confers to polycarbonate a good insulation with respect to profiled sheets made of metal material.

Thermal conductivity	0.20 W/m K

10. Thermal expansion

The polycarbonate thermal expansion value must always be borne in mind for a proper design.

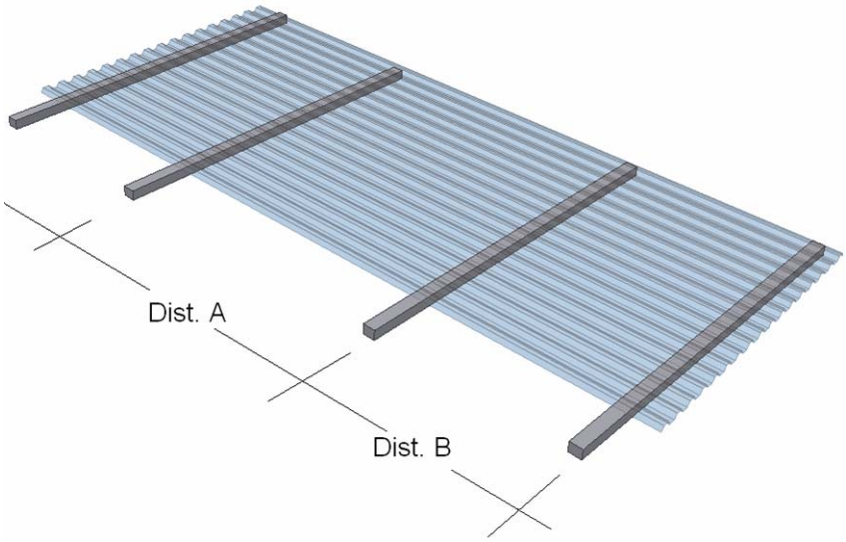
Thermal expansion	0.065 mm/m °C (6.5 x 10^{-5} 1/ K)

This value must be considered as an important parameter when selecting the suitable type of fixing.

11. Hail resistance

ROOFLITE® sheets have obtained excellent hail resistance performances. Impact tests have been performed at Istituto Giordano (Italy) with a simulated crashed test by means of polyamide balls with a diameter of 40 mm and thrown at subsequently growing speeds. No breakages were observed even at high speed (60 m/sec).

12. Flat solution



ROOFLITE® sheets shall be mounted on continuous and orthogonal supports with respect to the length of the sheets.
The supports must be smooth and free of any objects capable of jeopardising the integrity of the sheets, such as projecting nails, wires, strings, protection nets, etc.

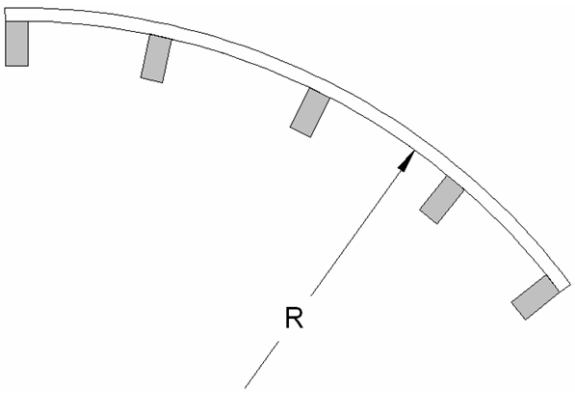
13. Minimum slope

In order to facilitate the flow of rain water we recommend laying the ROOFLITE® sheets with a minimum slope of 5%.

14. Recommended maximum length

Alongside the high thermal expansion typical of polycarbonate and depending on the type of fixing used in the past for the ROOFLITE®, we recommend using sheets with a maximum length of 4000 mm.
In case of extremely long flaps, we recommend overlapping several sheets length-wise; however, by means of a proper positioning of the slots suitably protected by sealing gaskets it is possible to use sheets even longer than 4 m.

15. Curved solution

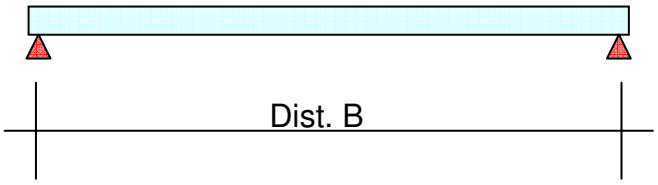


ROOFLITE® sheets may be mounted on curved structures but complying with the conditions that the radius outlined by the succession of the supports has a value greater than the minimum values indicated for each type of section.

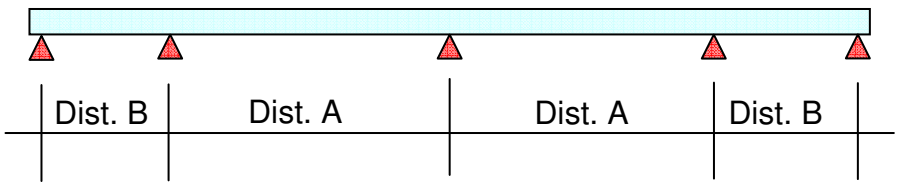
16. Allowable loads

Allowable values for the maximum distances between the supports are indicated in the tables regarding each single section. Such values can also be used for curved solutions. Alongside the type of sheet, the distance of the supports also depends on the type of application.

- Sheet solution on two supports



- Sheet solution on several supports



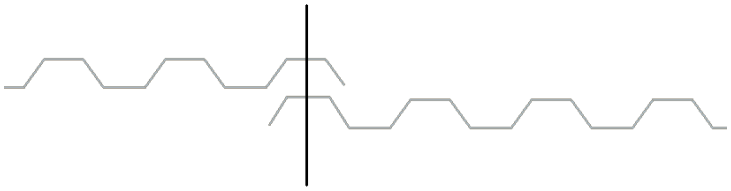
Fixing must be made on all purlins according to the methods and indications included in this document. The values indicated in the tables are

- ✓ Ultimate strength safetry coefficient equivalent to 1.5
- ✓ Maximum distortion 50 mm

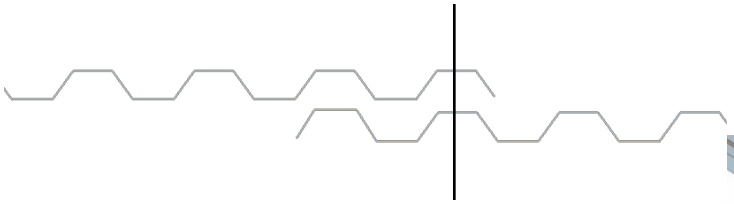
In case of very low slopes, deformation under load could create a counterslope causing leakage and water stagnation. In such cases, timely control of deformation under load is required.

17. Overlaps

Simple overlap

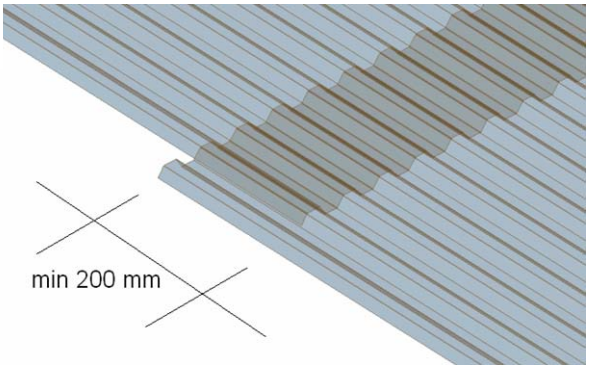


Double-pitch overlap

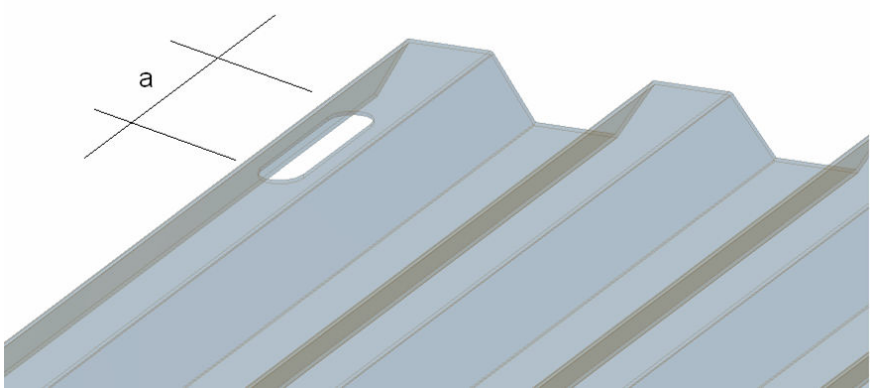


Overlapping ROOFLITE® sheets require following simple rules.
For side overlapping, at least one complete pitch is recommended, but in case of low slopes (5% to 10%) or in cases where the flap is considerably long (longer than 4 metres) at least a double pitch overlap is recommended.

In case of overlapping several sheets length-wise, it is necessary that such operation be performed at a transverse support and that there be at least a 200 mm overlap.



18. Fixing



Fixings must be provided with gaskets suitable to grant watertight sealing bearing in mind that the hole must be suitably slotted to guarantee the thermal expansion of the polycarbonate sheet.

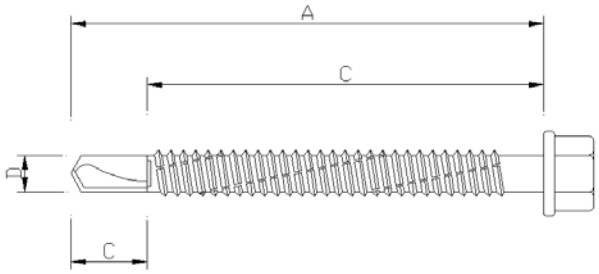
The slotting pitch depends on the length of the sheet and it is equivalent to:

Screw diameter 6 mm	
Sheet length (mm)	Slotting (mm)
Up to 2.000 mm	10 mm
Up to 4.000 mm	12 mm
Up to 6.000 mm	15 mm
Up to 8.000 mm	20 mm
Up to 10.000 mm	25 mm

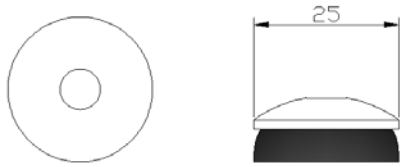
19. Fixing at the purling

ROOFLITE® sheets must be anchored in an integral manner with respect to the support structure through an adequate number of fixings and suitable for support (wood, metal purling, etc.).
The distance required for proper fixing depends on the pitch and shape of the wave.
The fastening force must be such not to deform the sheet but, at the same time, guarantee a good operation of the gasket.

✓ Self-drilling fixings on a metal structure with gasket and metal washer



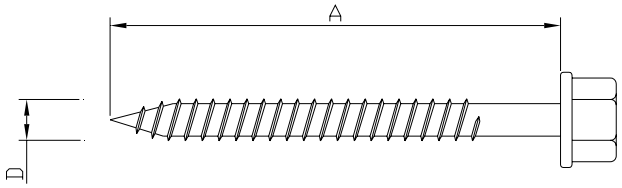
Self drilling screw



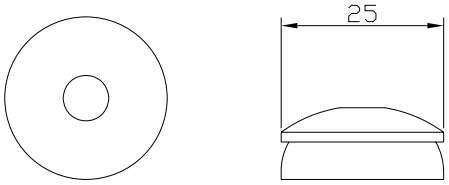
EPDM sealing washer with aluminium metal washer Φ 25 mm.

Size	Spanner (mm)	Diameter D (mm)	Total length A (mm)	Useable length B (mm)	Drilling capacity C (mm)
6.3 x 45 mm	8	6.3	45	30	6
6.3 x 60 mm	8	6.3	60	45	6
6.3 x 80 mm	8	6.3	80	65	6
6.3 x 100 mm	8	6.3	100	85	6

✓ Recommended fixings on wooden structures (not available) with gasket and metal washer.



Screw for wood

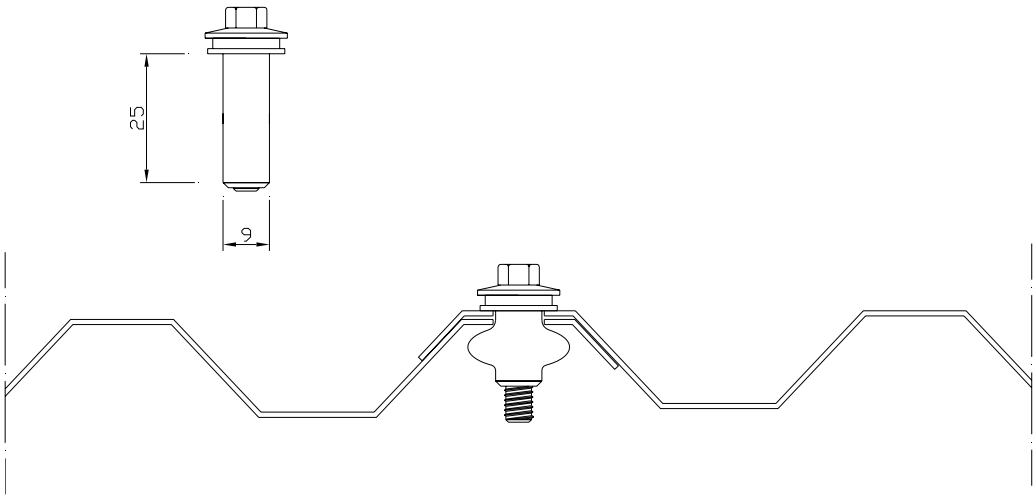


EPDM sealing washer with aluminium metal washer Φ 25 mm.

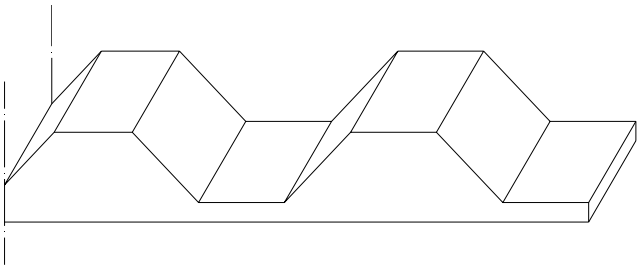
Size	Spanner (mm)	Diameter D (mm)	Length A (mm)
6.5 x 60 mm	8	6.5	60
6.5 x 75 mm	8	6.5	75
6.5 x 100 mm	8	6.5	100
For supports made of wood consider screwing at least 30 mm deep.			

20. Side overlap seam

At the side rebate of two ROOFLITE® sheets it is recommended to seam the two overlapped strips with a special dowel.



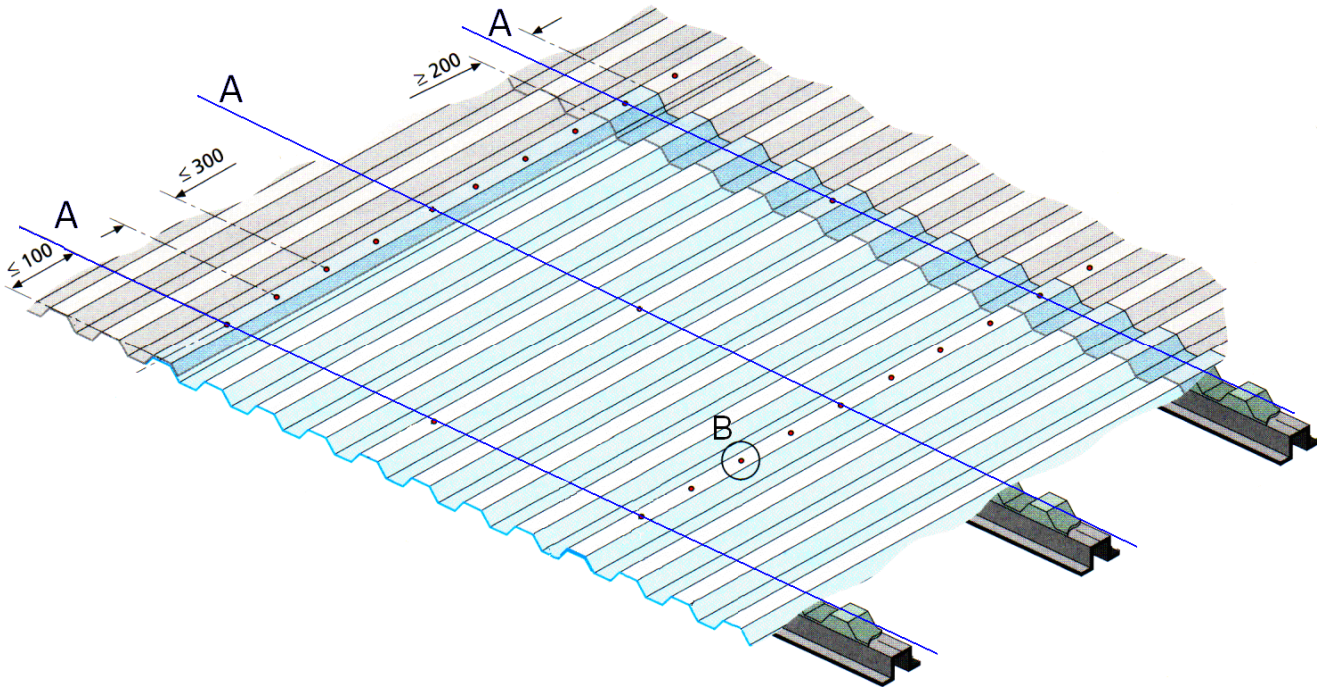
21. Closure strip



For better thermal insulation and in order to prevent the pressure-fastening of the screws from damaging the polycarbonate wave by pressing it, use of a shaped foamed PE closure strip to be interposed between the purling and the corrugated sheet.

22. Arrangement of the accessories

For proper laying of the ROOFLITE® sheet, the closure strips made of foamed PE are required to be arranged beneath the sheet so as to enhance resistance against the fastening force of the screw; furthermore, the closure strips bumper increase the air sealing between the support and the sheet. The distance of the purlins shall be assessed depending on the expected load, the thickness and type of sheet section (check the suitable sheet tables).
Fixings passing through the purlins (fixing lines A) shall be performed on the ridge of the sheet and sufficient (in number) to guarantee stability against wind. The seaming on the overlap, at positions where there is no the purlin (B), is being required for all side overlaps.
Minimum arrangement of fixings per sheet section can be observed from the product specifications sheet.



Overlapping with already installed sheets must be at least 200 mm both upstream and downstream. Such value shall be increased in case of low slope.
Any projections, with respect to the last purling, of the polycarbonate sheet shall not exceed 100 mm.

23. Packaging and forwarding

As standard packaging, ROOFLITE® sheets are supplied on wooden pallets, protected by a thermo-welded and strap-fastened thick polyethylene film.
Customised sheets shall be packaged according to the discretion of EMP SA. In case of special requests (transfer at worksites, unloading problems, etc), please make arrangements when placing orders with our sales offices and the latter will see to meeting your requirements.

24. Transport

ROOFLITE® sheets shall be transported on suitable means in such a manner that sheets and pallets completely lie against the platform. Ropes and blocks, required to hold the pallets firm during transport, shall be positioned in such a manner not to damage the sheets. Any damage occurring during transport shall be reported within eight hours upon reception of the goods. For proper analysis of the problem, reference to the CMR transport document is required.

25. Transfer and storage

Transfer and storage of ROOFLITE® sheets are delicate operations that could damage the sheets. Therefore, strict compliance with the following instructions is of paramount importance:

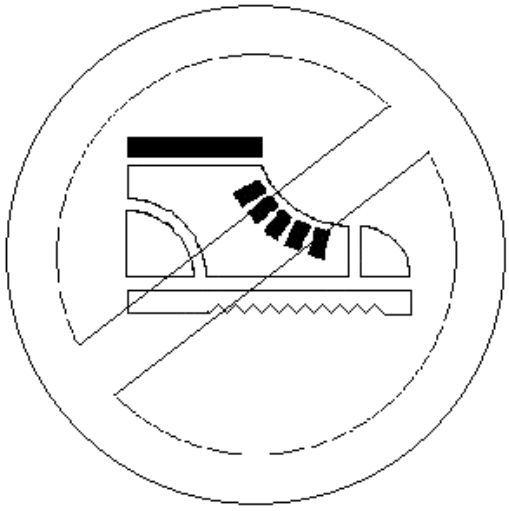
- Maximum care when using forklift trucks is recommended. Forks shall not come into direct contact with the sheets under no circumstances whatsoever.
- In case belts or balances are used for lifting, use belts at least 200 mm wide for proper distribution of weights, interpose a wooden board – with a greater length than the width – of the sheet between the package or pallets and the ropes.
- The distance of the forks must be such to avoid flexions of the pallet.
- In case of storage of several pallets stack a maximum of three pallets (do not stack the pallets directly but use supports capable of preserving the contact surface (polystyrene, insulations etc).
- In case of stacking a pallet previously laid against the ground, ensure that there are no stones stuck on lower part of the pallet capable of ruining the surface on which they are meant to lie.
- Stack the pallets with an integral packaging with a slight slope to allow flow of possible condensations and water stagnation.
- Keep the integral packages in sheltered place or in a place where they can be covered with canvas to protect the packages against harsh conditions and ensure proper aeration.
- Packages that have been already opened must be stored indoors.
- If performed by hand, transfer of single sheets shall occur with the sheet on its side.

26. Cleaning

When cleaning ROOFLITE® sheets, strictly use only products certified for cleaning polycarbonates (see the manufacturer specifications sheet).
In order to maintain the light transmission, the latter must be cleaned periodically with water and non-alkaline soap or with suitable detergents, subsequently thoroughly rinsing with water.
Dirt must be removed with maximum care, using soft rags to avoid altering the UV protection layer.

WARNING:
Do not use alkaline detergents, solvents in general, abrasive detergents, brushes, steel wool, blades or sharp devices that might damage the UV protection layer.

27. Safety – Access to roofing



During both laying and maintenance operations do not walk directly on the ROOFLITE® polycarbonate sheets.

As a matter of fact, the polycarbonate sheets are NOT made to be walked on and they are subject to breaking.
In case you need access to the roofing, use the suitable gangways which guarantee safety for all the operators.

Protect the sheets against possible scratches with suitable covers.

WARNING:
In case of access to the roofing, should there be risks of falling or breaking, assemble all the required elements in compliance with all the work safety regulations in force in the country in question.

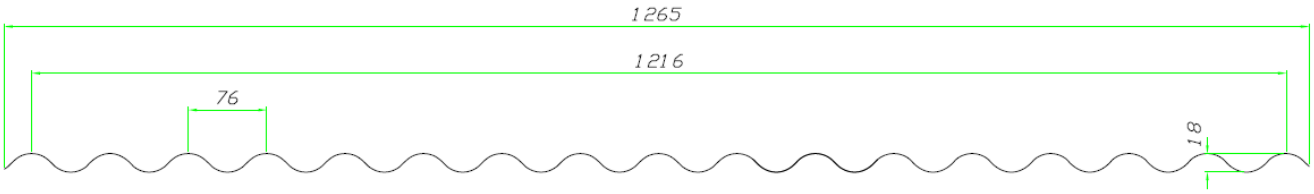
WARNING: Purchase of ROOFLITE® sheets is subject to reserves, please check general sales conditions from our offices.

WARNING: The information provided for in this manual was gathered to help customers during design and laying steps. Such information was processed according to our topmost know-how and it shall be subjected to modifications without prior notice. Data borne herein shall be deemed as non-binding information and hence shall not exempt the customer for performing his own check-ups with the aim of establishing suitability for the intended use. In case of doubt or difficulty, please seek EMP SA advice before proceeding.

ANNEX 1 – WAVE 76/18

ROOFLITE WAVE 76/18

Section

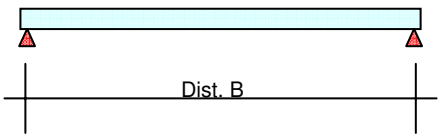


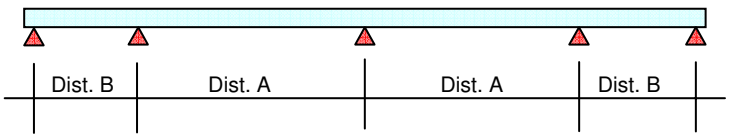
THICKNESSES	**0.8 mm**	*1.0 mm*	*1.1 mm*
WEIGHT	**1.10 kg/m²**	*1.35 kg/m²*	*1.50 kg/m²*

WIDTH	**Nominal (Sheet max)**	**Useable**
	660 mm	*608 mm*
	836 mm	*900 mm*
	1.040 mm	*988 mm*
	1.116 mm	*1.064 mm*
	1.265 mm	**1.216 mm**

STANDARD LENGTH	**6.000 mm**
AVAILABLE COLOURS	**Clear** *Opal*
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)
MINIMUM BENDING RADIUS	4.000 mm
MINIMUM SLOPE	5%
RECOMMENDED FIXING	Self-drilling 6.3x60 mm with EPDM gasket (max every 300 mm) Self-tapping for wood 6.5x60mm with EPDM gasket (max every 300 mm) Seaming plug (max every 300 mm)
CLOSURE STRIP	Available in 988 mm bars

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	1.000	900	850	800	800	700	650	650
1.0	1.050	950	900	850	850	750	700	650
1.1	1.100	1.000	900	850	850	800	750	700

(*) Values are given using a safety coefficient of 1.5

Standard production

Non-standard production

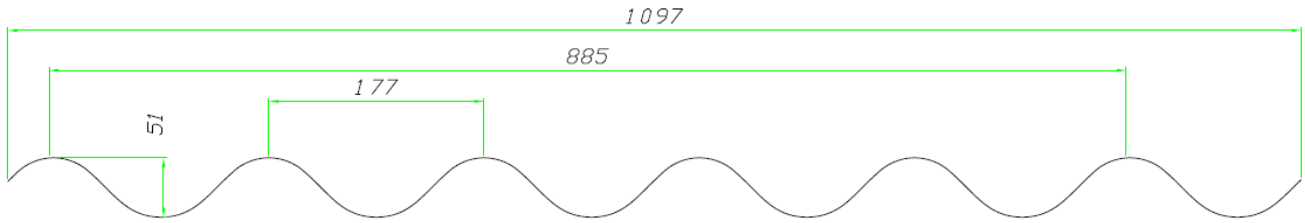
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual

ANNEX 2 – WAVE 177/51 (Eternit)

ROOFLITE WAVE 177/51

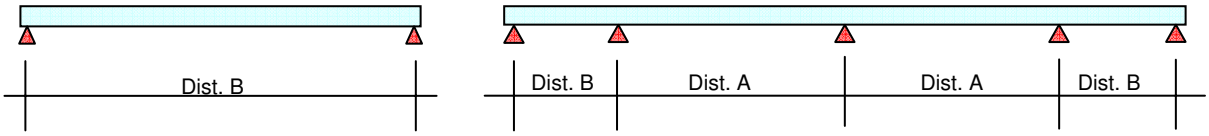
Section



✓ ETERNIT

THICKNESSES	**1.0 mm**	*1.2 mm*	*1.4 mm*
WEIGHT	**1.45 kg/m²**	*1.70 kg/m²*	*2.00 kg/m²*
WIDTH	**Nominal (Sheet max)** *920 mm* **1.097 mm**	**Useable** *708 mm* **885 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	11.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x100mm with EPDM gasket (max every 350 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 350 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	available in 2000 mm bars		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.650	1.500	1.400	1.350	1.350	1.200	1.100	1.050
1.2	1.750	1.600	1.450	1.400	1.400	1.250	1.150	1.100
1.4	1.800	1.650	1.500	1.450	1.450	1.300	1.200	1.150

(*) values are given using a safety coefficient of 1.5

Standard production

Non-standard production

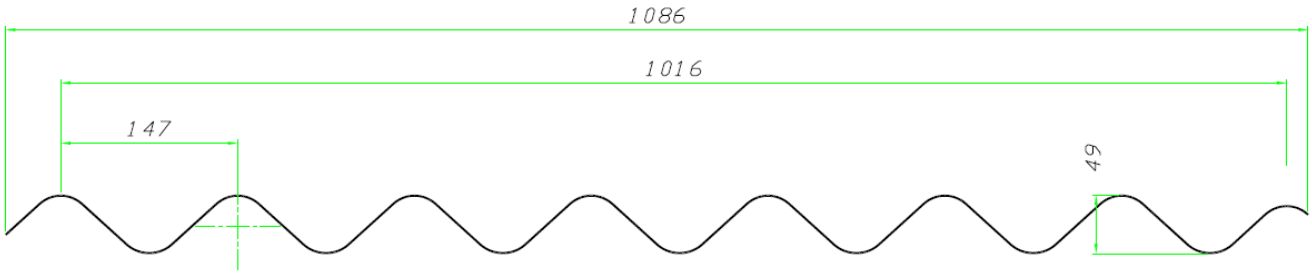
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual

ANNEX 3 – WAVE 147/49 (Eternit)

ROOFLITE WAVE 147/49

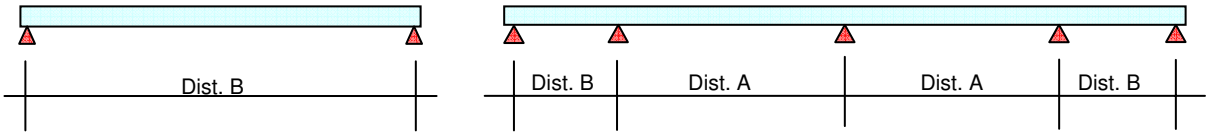
Section



✓ ETERNIT B6

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.45 kg/m²**	*1.75 kg/m²*	
WIDTH	**Nominal (Sheet max)** *1.050 mm* **1.086 mm**	**Useable** *879 mm* **1.016 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	11.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80 mm with EPDM gasket (max every 300 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 300 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.600	1.450	1.350	1.250	1.250	1.150	1.050	1.000
1.2	1.650	1.500	1.400	1.350	1.350	1.200	1.100	1.050

(*) Values are given using a safety coefficient of 1.5

Standard production

Non-standard production

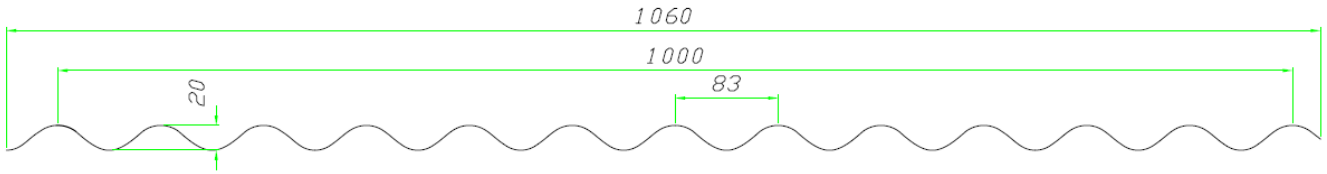
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 4 – WAVE 83/20 (Iscom)

ROOFLITE WAVE 83/20

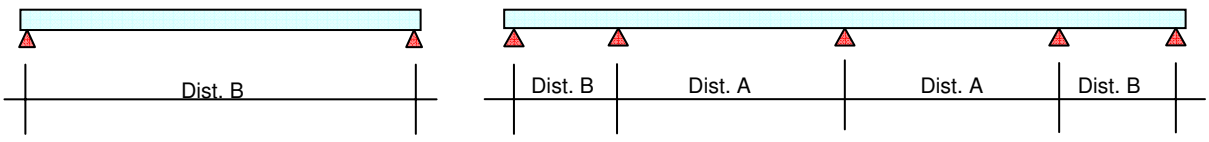
Section



✓ ISCOM – Sinus 20-83

THICKNESSES	**1.2 mm**		
WEIGHT	**1.65 kg/m²**		
WIDTH	**Nominal (Sheet max) 1.060 mm**		**Useable 1.000 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	4.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (max every 250 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 250 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.2	1.100	1.000	950	900	900	800	750	700

(*) Values are give using a safety coefficient of 1.5

Standard production

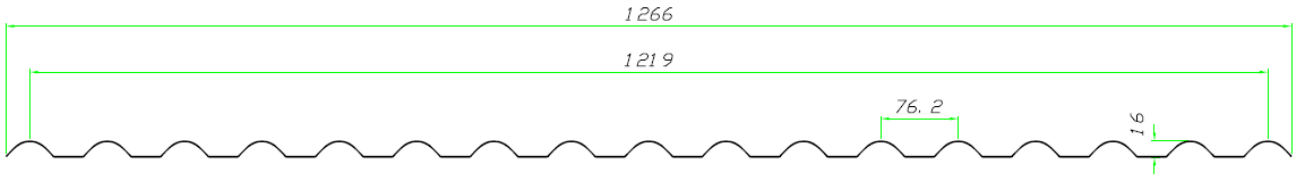
Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual

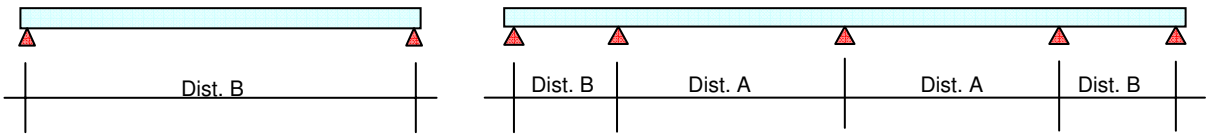
ROOFLITE OMEGA 76.2/16

Section



THICKNESSES	**0.8 mm**	*1.0 mm*	
WEIGHT	**1.10 kg/m²**	*1.40 kg/m²*	
WIDTH	**Nominal (Sheet max)** *1.190 mm* **1.266 mm**	**Useable** *1.143 mm* **1.219 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	4.000 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (max every 300 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 300 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	950	850	800	750	750	700	650	600
1.0	1.000	900	850	800	000	750	700	650

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

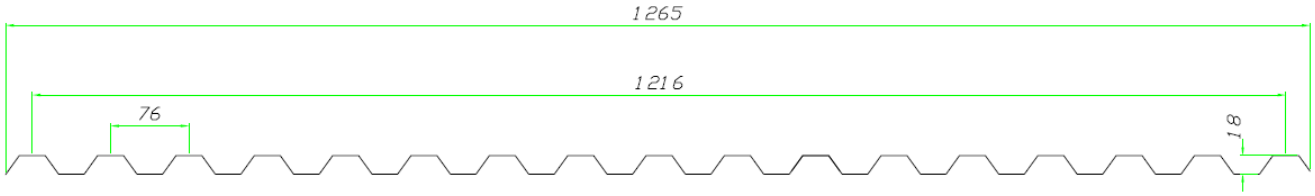
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual

ANNEX 6 – TRAPEZ 76/18

ROOFLITE TRAPEZ 76/18

Section

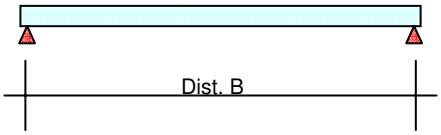


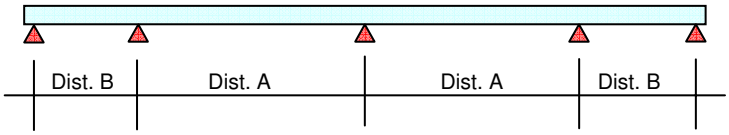
THICKNESSES	**0.8 mm**	*1.0 mm*	*1.1 mm*
WEIGHT	**1.20 kg/m²**	*1.45 kg/m²*	*1.60 kg/m²*

WIDTH	**Nominal (Sheet max)**	**Useable**
	660 mm	*608 mm*
	807 mm	*760 mm*
	1.040 mm	*988 mm*
	1.116 mm	*1.064 mm*
	1.265 mm	**1.216 mm**

STANDARD LENGTH	**6.000 mm**
AVAILABLE COLOURS	**Clear** *Opal, bronze, athermic*
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)
MINIMUM BENDING RADIUS	4.000 mm
MINIMUM SLOPE	5%
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (max every 300 mm) Self-tapping for wood 6.5x60mm with EPDM gasket (max every 300 mm) Seaming plug (max every 300 mm)
FOAMED PE CLOSURE STRIP	available in 1000 mm bars

✓ MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	1.100	1.000	900	850	850	800	750	700
1.0	1.150	1.050	950	900	900	850	800	750
1.1	1.250	1.050	1.000	950	950	850	800	750

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

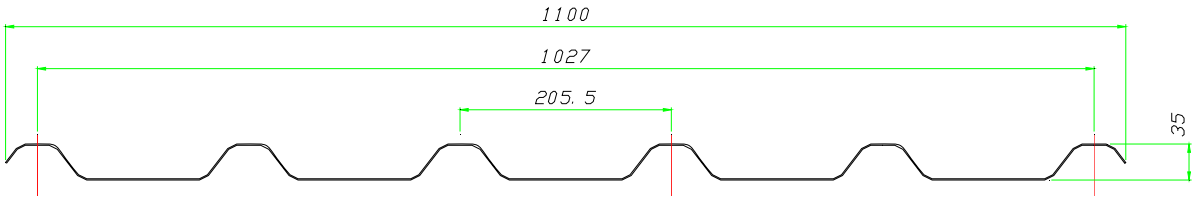
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 7 – TRAPEZ 205,4/35,4

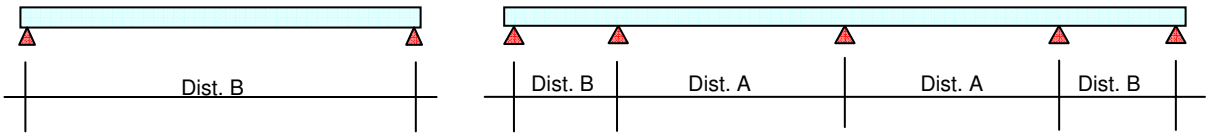
ROOFLITE TRAPEZ 205,4/35,4

Section



THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.45 kg/m²**	*1.70 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.100 mm**		**Useable 1.027 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	8.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80mm with EPDM gasket (max every 207 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 207 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.450	1.350	1.250	1.150	1.150	1.050	1.000	950
1.2	1.550	1.400	1.300	1.250	1.250	1.100	1.050	1.000

(*) Values are give using a safety coefficient of 1.5

Standard production

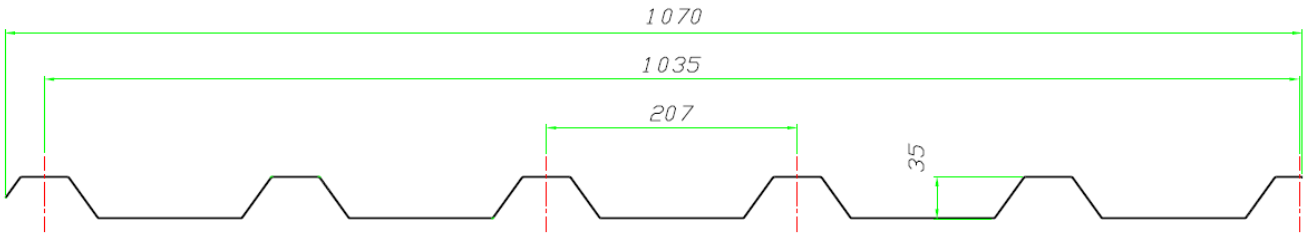
Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ROOFLITE TRAPEZ 207/35

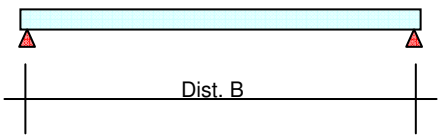
Section

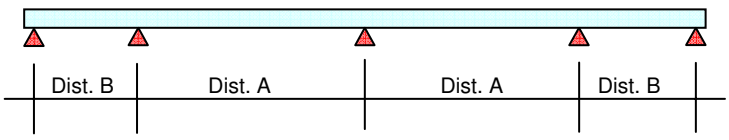


✓ KLOCKNER 35/207

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.45 kg/m²**	*1.70 kg/m²*	
WIDTH	**Nominal (Sheet max)** *1.070 mm* **1.100 mm**	**Useable** *1.035 mm* **1.035 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Cristal** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	8.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80mm with EPDM gasket (max every 207 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 207 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.500	1.350	1.250	1.200	1.200	1.050	1.000	950
1.2	1.550	1.400	1.300	1.250	1.250	1.100	1.050	1.000

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

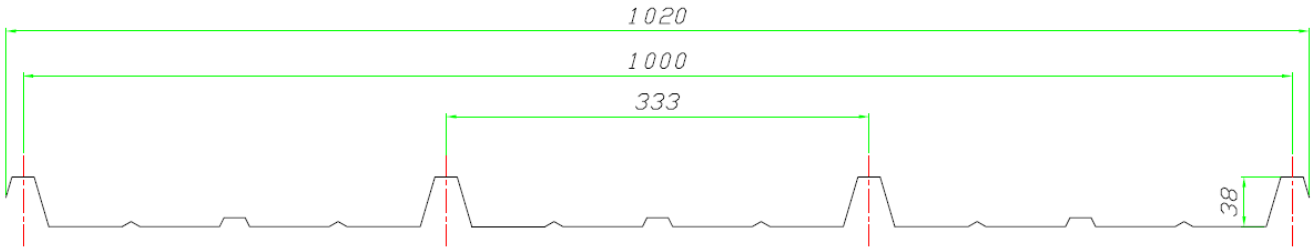
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 9 – TRAPEZ 333/38 (Metecno)

ROOFLITE TRAPEZ 333/38

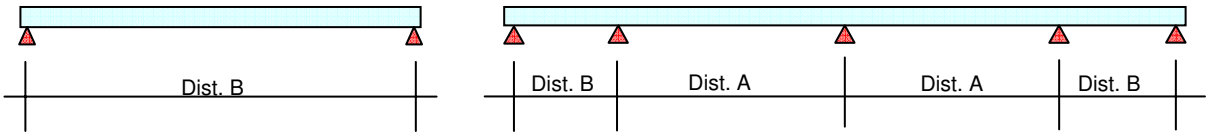
Section



✓ METECNO A38

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.50 kg/m²**	*1.80 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.020 mm**		**Useable 1.000 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	8.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Upper fret: Self-drilling 6.3x80mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 333 mm) Lower fret: Self-drilling 6.3x45mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x60mm with EPDM gasket (max every 333 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Available in 1000 mm bars		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.400	1.250	1.150	1.000	1.100	1.000	950	900
1.2	1.450	1.350	1.250	1.100	1.150	1.050	1.000	950

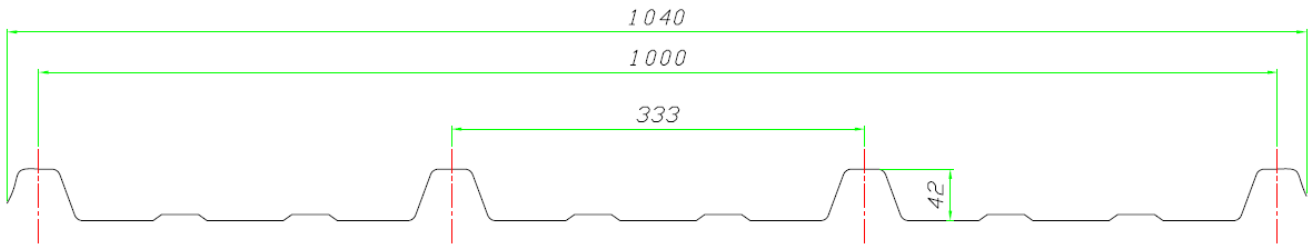
(*) Values are give using a safety coefficient of 1.5

Standard production
Non-standard production
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices
For further laying conditions see the ROOFLITE® technical manual.

ANNEX 10 – TRAPEZ 333/42 (Remco)

ROOFLITE TRAPEZ 333/42

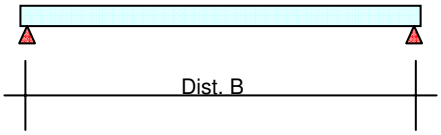
Section

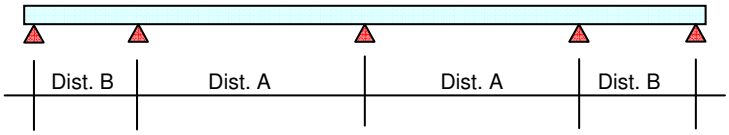


✓ REMCO

THICKNESSES	**1.0 mm**		
WEIGHT	**1.50 kg/m²**		
WIDTH	**Nominal (Sheet max)** **1.040 mm**	**Useable** **1.000 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Crystal** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	9.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Upper sheet: Self-drilling 6.3x80mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 333 mm) Lower sheet: Self-drilling 6.3x45mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x60mm with EPDM gasket (max every 333 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.500	1.400	1.300	1.200	1.200	1.100	1.050	950

(*) Values are given using a safety coefficient of 1.5

Standard production

Non-standard production

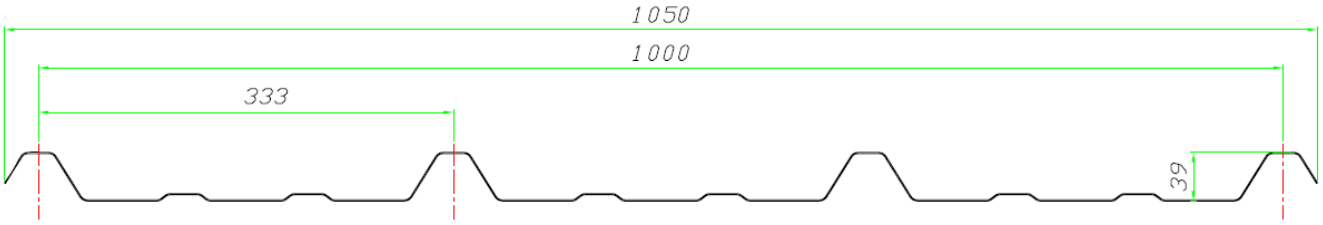
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 11 – TRAPEZ 333/39 (Haironville)

ROOFLITE TRAPEZ 333/39

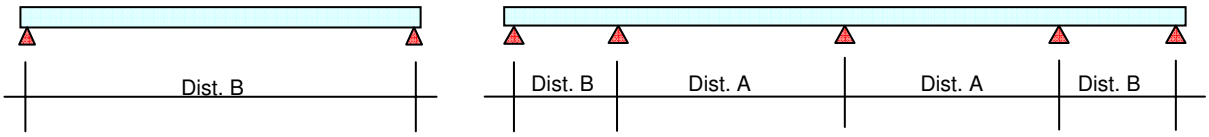
Section



✓ HAIRONVILLE 39/333

THICKNESSES	**1.0 mm**	*1.2 mm*	*1.4 mm*
WEIGHT	**1.40 kg/m²**	*1.70 kg/m²*	*1.95 kg/m²*
WIDTH	**Nominal (Sheet max) 1.050 mm**		**Useable 1.000 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	8.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Upper sheet: Self-drilling 6.3x80mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 333 mm) Lower sheet: Self-drilling 6.3x45mm with EPDM gasket every 333 mm Self-tapping for wood 6.5x60mm with EPDM gasket (max every 333 mm) Seaming plug (max every 300 mm)		
FOAMED PE SPACER	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.400	1.300	1.200	1.100	1.150	1.050	950	900
1.2	1.500	1.350	1.250	1.200	1.200	1.050	1.000	950

(*) Values are given using a safety coefficient of 1.5

Standard production

Non-standard production

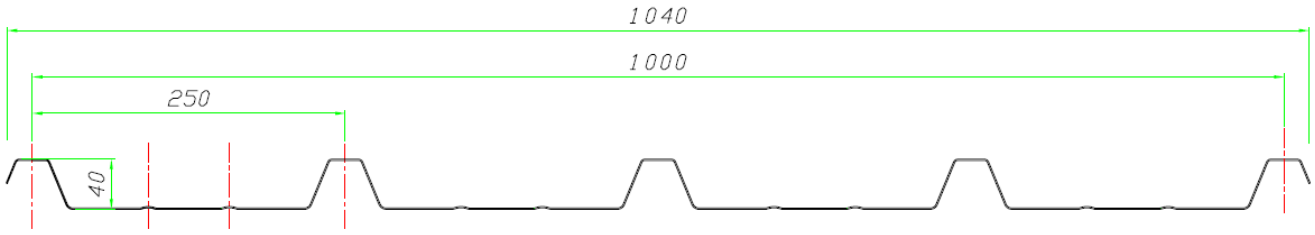
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 12 – TRAPEZ 250/40 (5greche)

ROOFLITE TRAPEZ 250/40

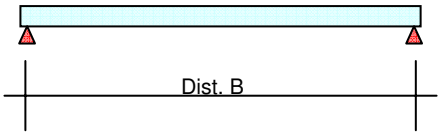
Section

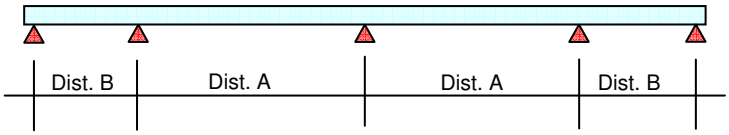


✓ 5 frets

THICKNESSES	**1.0 mm**		
WEIGHT	**1.50 kg/m²**		
WIDTH	**Nominal (Sheet max) 1.040 mm**	**Useable 1.000 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Crystal** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	9.000 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80mm with EPDM gasket (every 250 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 250 mm) Seaming plug (max every 300 mm)		
FOAMED PE SPACER	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.500	1.350	1.300	1.200	1.200	1.100	1.000	950

(*) Values are given using a safety coefficient of 1.5

Standard production

Non-standard production

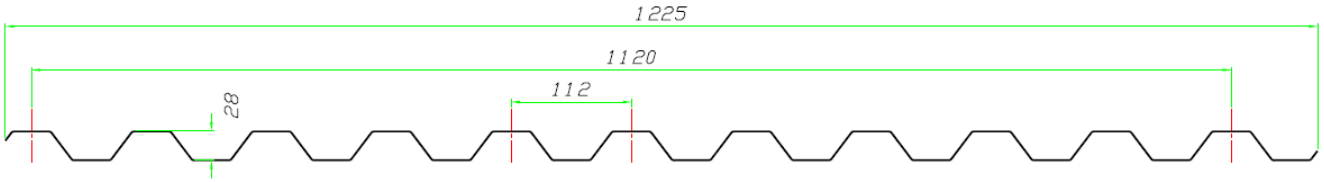
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 13 – TRAPEZ 112/28 (LG 28)

ROOFLITE TRAPEZ 112/28

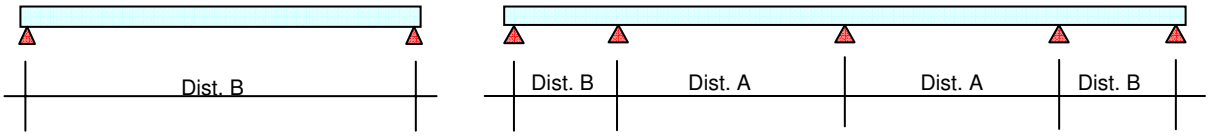
Section



- ✓ PROFILIA LG 28
- ✓ ALUBEL 28

THICKNESSES	**1.0 mm**	*1.2 mm*	*1.4 mm*
WEIGHT	**1.50 kg/m²**	*1.80 kg/m²*	*2.10 kg/m²*
WIDTH	**Nominal (Sheet max)** *1.016 mm* **1.225 mm**	**Useable** *896 mm* **1.120 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	6.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 336 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 336 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.400	1.250	1.150	1.100	1.100	1.000	950	900
1.2	1.450	1.300	1.200	1.150	1.150	1.050	1.000	900
1.4	1.500	1.350	1.250	1.200	1.200	1.100	1.000	950

(*) Values are given using a safety coefficient of 1.5

Standard production

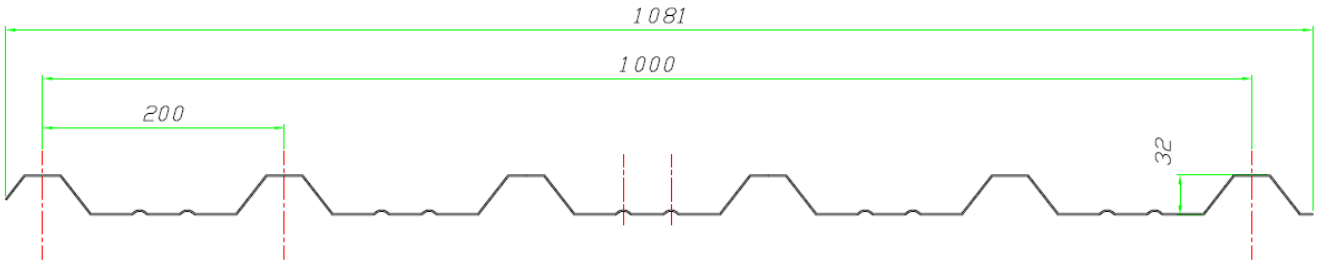
Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ROOFLITE TRAPEZ 200/32

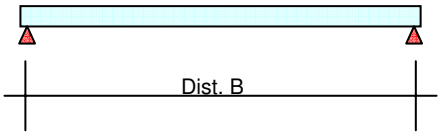
Section

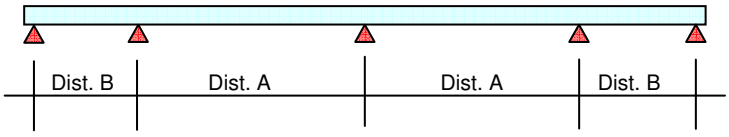


✓ HIANSA MT-32

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.40 kg/m²**	*1.65 kg/m²*	
WIDTH	**Nominal (Sheet max)** *1.081 mm* **1.100 mm**	**Useable** *1.000 mm* **1.000 mm**	
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	7.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 200 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 200 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.400	1.300	1.200	1.150	1.150	1.000	950	900
1.2	1.500	1.350	1.250	1.200	1.200	1.050	1.100	950

(*) Values are given using a safety coefficient of 1.5

Standard production

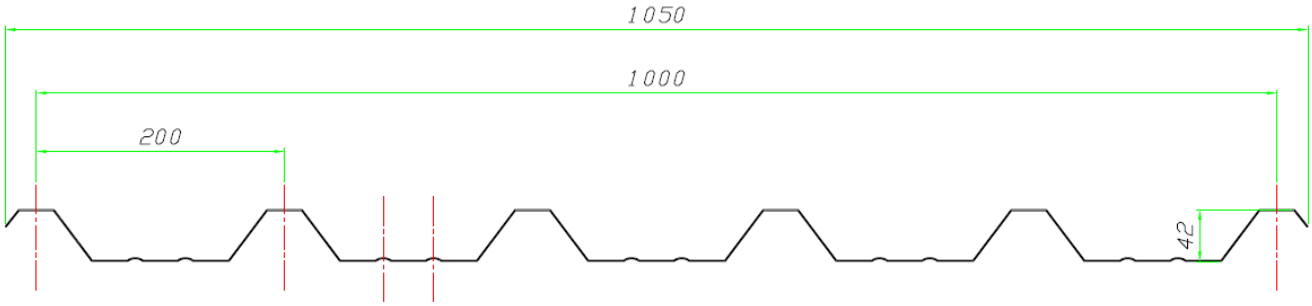
Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.

ROOFLITE TRAPEZ 200/42

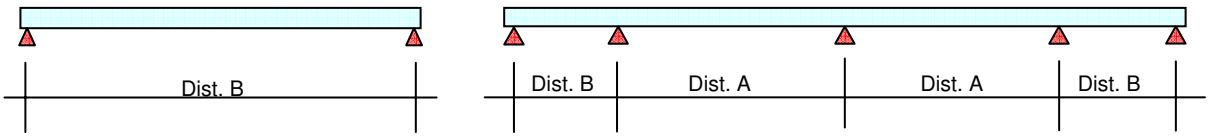
Section



✓ HIANSA MT-42

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.45 kg/m²**	*1.75 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.050 mm**		**Useable 1.000 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	9.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80mm with EPDM gasket (every 200 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 200 mm) Seaming plug (max every 300 mm)		
FOAMED PE SPACER	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.600	1.450	1.350	1.300	1.300	1.150	1.100	1.000
1.2	1.650	1.500	1.400	1.350	1.350	1.200	1.150	1.050

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

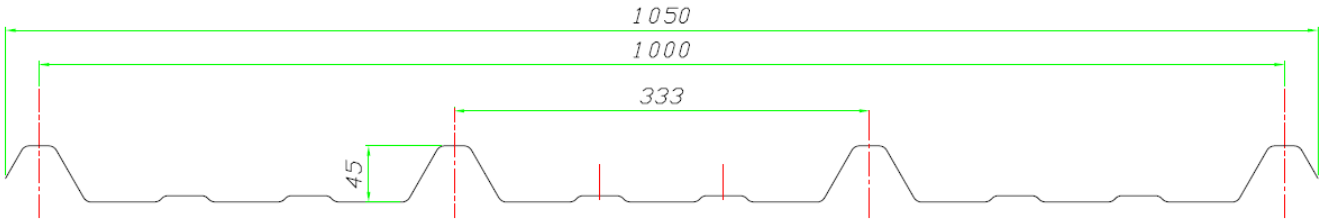
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 16 – TRAPEZ 333/45 (Nervesco)

ROOFLITE TRAPEZ 333/45

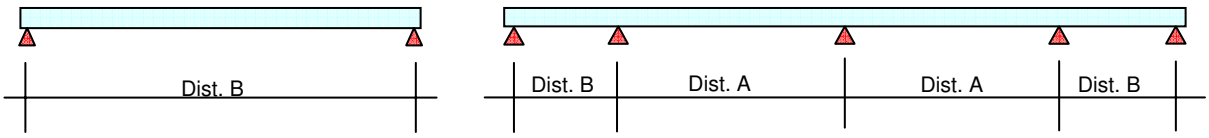
Section



✓ NERVESCO 3.45.1000 TS

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.45 kg/m²**	*1.70 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.050 mm**		**Useable 1.000 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	9.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Upper sheet: Self-drilling 6.3x80mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 333 mm) Lower sheet: Self-drilling 6.3x45mm with EPDM gasket (every 333 mm) Self-tapping for wood 6.5x60mm with EPDM gasket (max every 333 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.550	1.400	1.300	1.200	1.250	1.150	1.050	1.000
1.2	1.650	1.450	1.350	1.300	1.300	1.200	1.100	1.050

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

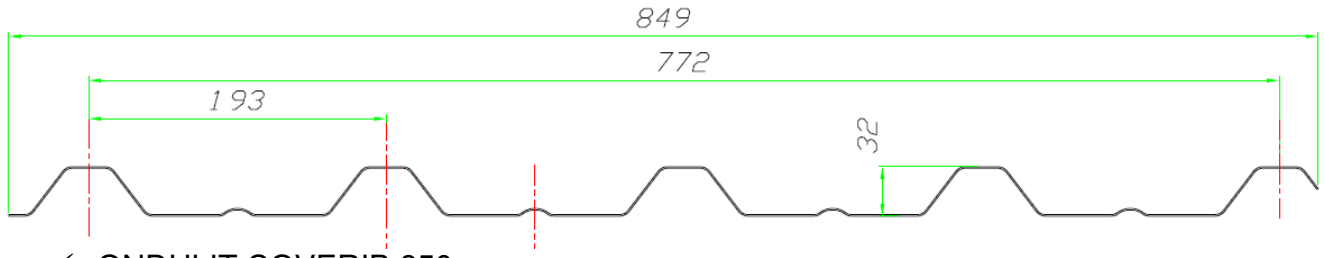
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 17 – TRAPEZ 193/32 (Ondulit)

ROOFLITE TRAPEZ 193/32

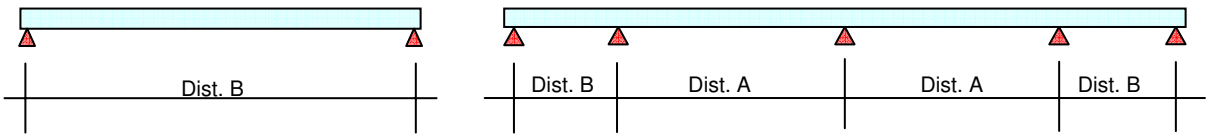
Section



✓ ONDULIT COVERIB 850

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.45 kg/m²**	*1.70 kg/m²*	
WIDTH	**Nominal (Sheet max) 849 mm**		**Useable 772 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Crystal** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM RADIUS OF CURVATURE	7.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 193 mm) Self-tapping for wood 6.5x60mm with EPDM gasket (max every 193 mm) Seaming plug (max every 300 mm)		
SPACER MADE OF FOAMED PE	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.300	1.200	1.100	1.050	1.050	950	900	850
1.2	1.350	1.250	1.150	1.100	1.100	1.000	900	850

(*) Breaking strength values (safety coefficient 1.5)

Standard production

Non-standard production

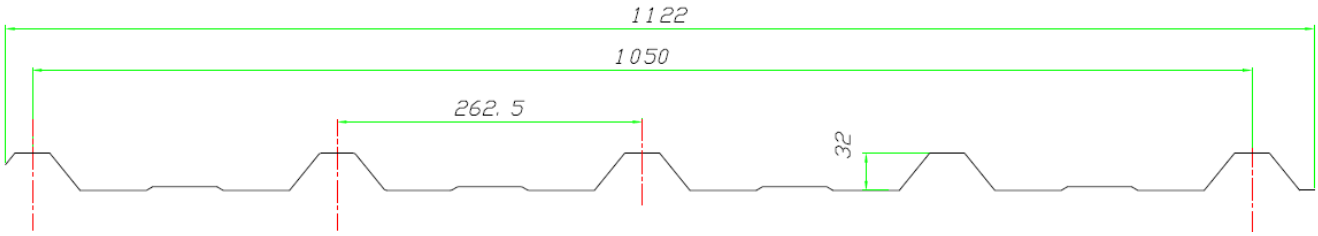
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 18 – TRAPEZ 262,5/32 (Teczone)

ROOFLITE TRAPEZ 262,5/32

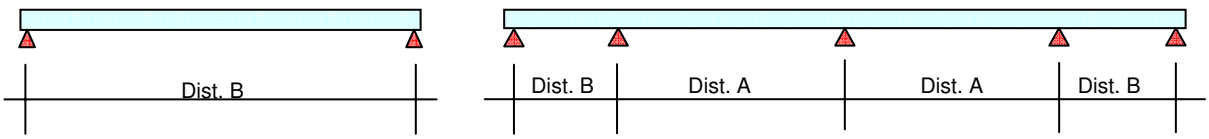
Section



✓ TECZONE TZ-32

THICKNESSES	**0.8 mm**	*1.0 mm*	
WEIGHT	**1.10 kg/m²**	*1.35 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.122 mm**		**Useable 1.050 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	7.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 262 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 262 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	1.300	1.200	1.100	1.050	1.050	950	900	850
1.0	1.400	1.250	1.150	1.100	1.100	1.000	950	900

(*) Values are give using a safety coefficient 1.5

Standard production

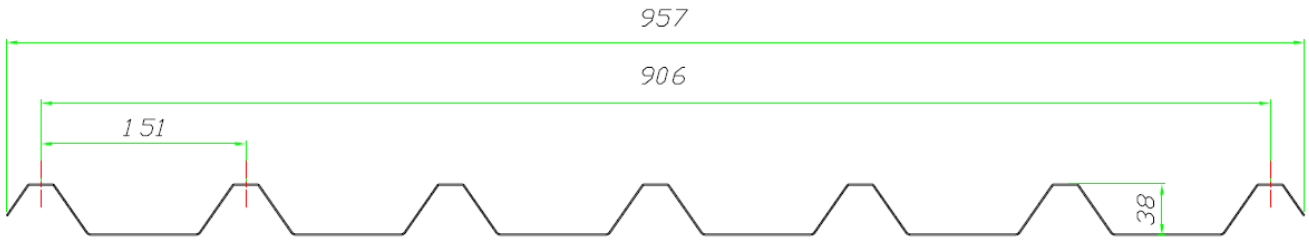
Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ROOFLITE TRAPEZ 151/38

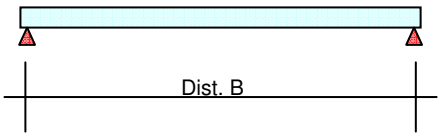
Section

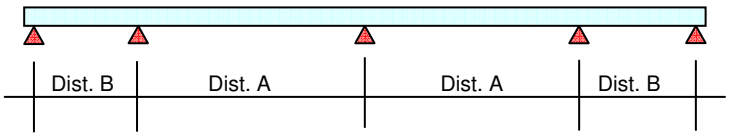


✓ ASSANPANEL 38/151

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.55 kg/m²**	*1.85 kg/m²*	
WIDTH	**Nominal (Sheet max) 957 mm**		**Useable 906 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	8.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80mm with EPDM gasket (every 300 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 300 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**





Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.500	1.350	1.250	1.200	1.200	1.050	1.000	950
1.2	1.550	1.400	1.300	1.250	1.250	1.100	1.050	1.000

(*) Breaking strength values (safety coefficient 1.5)

Standard production

Non-standard production

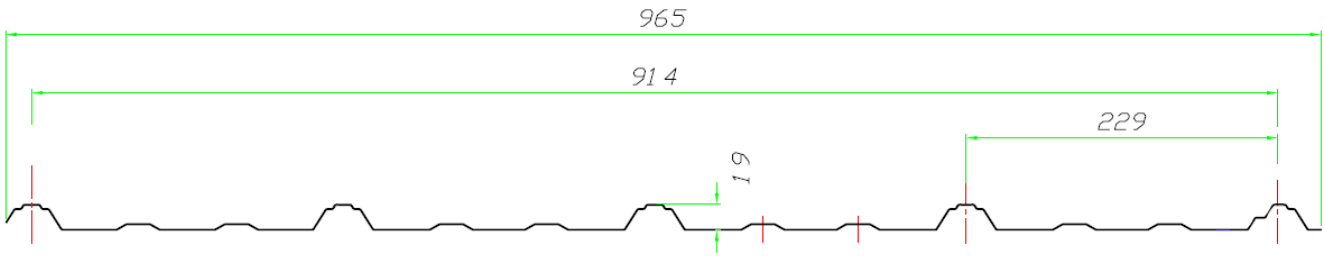
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 20 – TRAPEZ 228,6/19,05 (9" x 3/4") (MB9)

ROOFLITE TRAPEZ 228,6/19,05

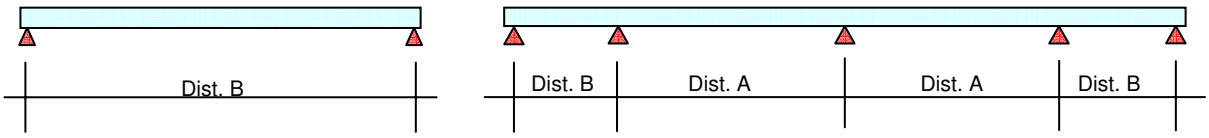
Section



✓ MB9

THICKNESSES	**0.8 mm**		
WEIGHT	**1.10 kg/m²**		
WIDTH	**Nominal (Sheet max) 965 mm**		**Useable 914 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	4.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 230 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 300 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	900	750	650	600	700	650	600	550

(*) Values are given using a safety coefficient of 1.5

Standard production

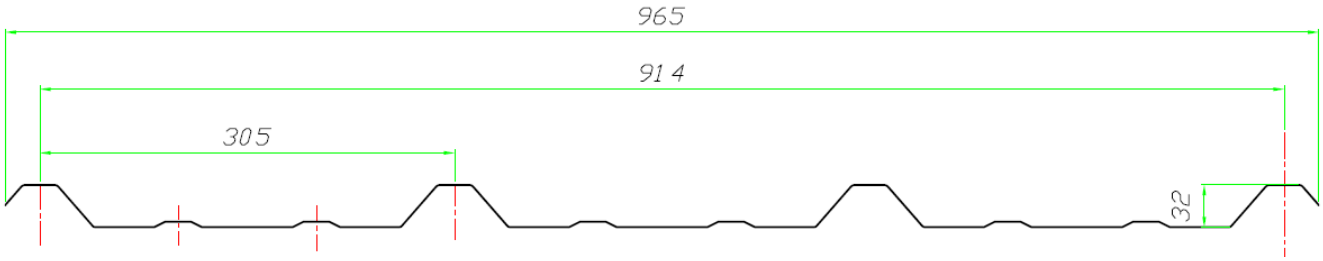
Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual

ROOFLITE TRAPEZ 304,8/31,8

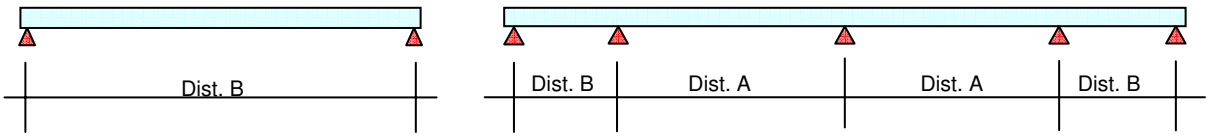
Section



✓ MB12

THICKNESSES	**0.8 mm**	*1.0 mm*	
WEIGHT	**1.10 kg/m²**	*1.40 kg/m²*	
WIDTH	**Nominal (Sheet max) 965 mm**		**Useable 914 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	7.500 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 305 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 305 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	1.200	1.100	950	850	905	850	800	750
1.0	1.250	1.150	1.050	950	1.000	900	850	800

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

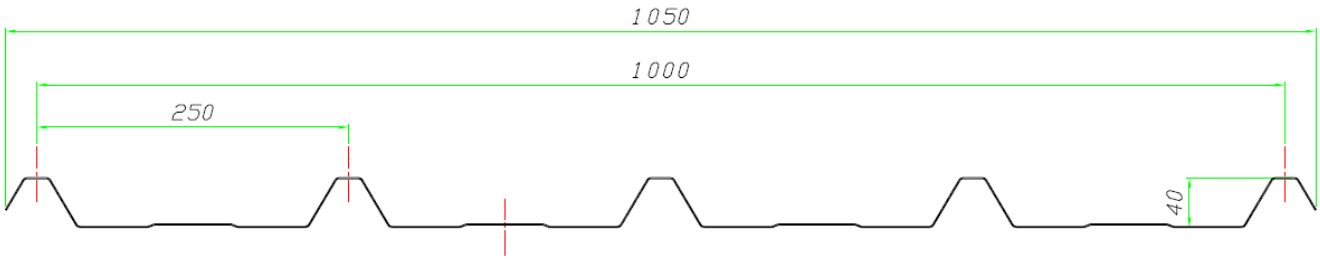
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 22 – TRAPEZ 250/40 (Cobacier)

ROOFLITE TRAPEZ 250/40

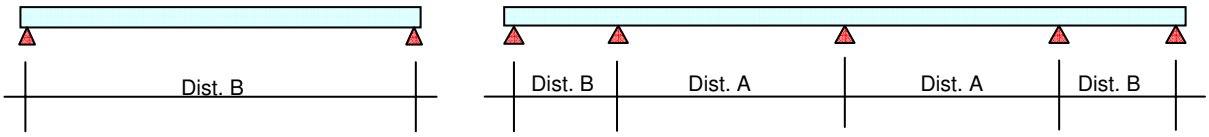
Section



✓ COBACIER 1004

THICKNESSES	**1.0 mm**	*1.3 mm*	
WEIGHT	**1.45 kg/m²**	*1.90 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.050 mm**		**Useable 1.000 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Clear** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	9.000 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x80mm with EPDM gasket (every 250 mm) Self-tapping for wood 6.5x100mm with EPDM gasket (max every 250 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
0.8	1.500	1.350	1.250	1.150	1.200	1.050	1.000	950
1.3	1.550	1.400	1.350	1.250	1.250	1.150	1.050	1.000

(*) Values are give using a safety coefficient of 1.5

Standard production

Non-standard production

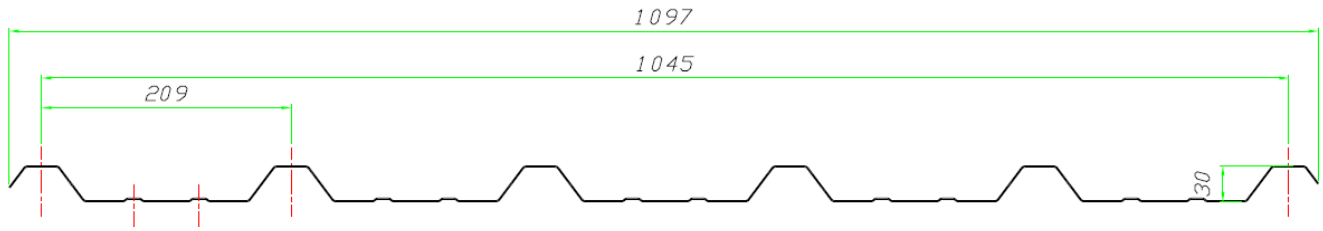
Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.

ANNEX 23 - TRAPEZ 209/30 (Aceralia)

ROOFLITE TRAPEZ 209/30

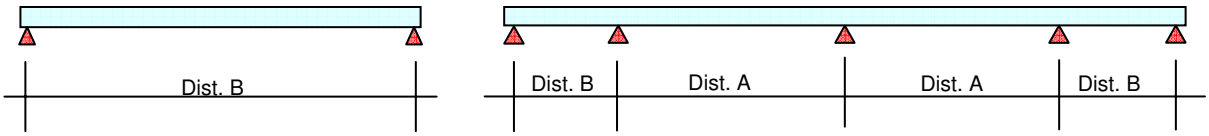
Section



✓ ACERALIA

THICKNESSES	**1.0 mm**	*1.2 mm*	
WEIGHT	**1.40 kg/m²**	*1.70 kg/m²*	
WIDTH	**Nominal (Sheet max) 1.097 mm**		**Useable 1.045 mm**
STANDARD LENGTH	**6.000 mm**		
AVAILABLE COLOURS	**Crystal** *Opal*		
THERMAL EXPANSION	0.065 mm/m °C (6.5 x 10^{-5} 1/°C)		
MINIMUM BENDING RADIUS	7.000 mm		
MINIMUM SLOPE	5%		
RECOMMENDED FIXING	Self-drilling 6.3x60mm with EPDM gasket (every 209 mm) Self-tapping for wood 6.5x75mm with EPDM gasket (max every 209 mm) Seaming plug (max every 300 mm)		
FOAMED PE CLOSURE STRIP	Not available		

✓ **MAXIMUM ALLOWABLE LOADING VALUES (*) FOR EVENLY DISTRIBUTED LOADS**



Thickness mm	Distance A				Distance B			
	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²	600 N/m²	900 N/m²	1.200 N/m²	1.500 N/m²
1.0	1.350	1.200	1.150	1.050	1.050	950	900	850
1.2	1.400	1.250	1.200	1.100	1.100	1.000	950	900

(*) Values are given using a safety coefficient of 1.5

Standard production

Non-standard production

Customised lengths manufactured upon minimum amounts of order. Colours provided per request upon minimum amounts of orders. Illustrative drawings, check tolerance (weight, dimensions, width, pitch) from our offices.

For further laying conditions see the ROOFLITE® technical manual.