Ondatec

CORRUGATED MULTIWALL PANELS

Ondatec

2.5 6

Ondatec panels are recommended for applications which require natural daylighting where the panels will be installed to match metal or fibre cement profiles. The product is supplied with thermowelded ends to reduce the condensation and the accumulation of dirt on the inside of the structure. It overlaps laterally and longitudinally, thus creating the possibility to realize lengths covering the whole slope. The range of optional accessories which completes the **Ondatec** makes its use very easy and versatile.

LL PLUS

Benefits

- **Lightweight**
- **High thermal insulation**
- **Excellent impact resistance**
- **Good light transmission**
- **Good fire performance**
- **Certified quality guarantee**
- **UV protection**

WARRANTY G10 10 YEARS

Main advantages of Ondatec system

Impact resistance

Polycarbonate's mechanical properties make this the technopolymer with the highest impact resistance, allowing it to provide optimum protection against accidental damage and weather-related damage. These qualities mean polycarbonate significantly outperforms other materials (glass, acrylic, PET, etc.) commonly used in applications where transparency is a key requirement. Impact resistance remains constant across a particularly wide temperature range.

Thermal expansion

Thermal expansion is a characteristic property of materials that consists in their tendency to change in size as temperature increases and decreases. This expansion is quantified via a coefficient that, in the case of polycarbonate, equates to $6{,}5x10^{-5}$ 1/K (0.065 mm/m°C). The fact that this coefficient value is much higher than the values associated with materials usually used for roofing and joinery (aluminium, steel, etc.) generates the need for solutions that compensate for this difference in thermal expansion, which thus needs to be factored in at the design stage and in all building applications.

Light transmission

Proper lighting design entails ensuring that the building interior receives the required amount of light. So it is clearly important to use sheets that let enough light through. The **Ondatec** product range gives you plenty of choice at the design stage of your project, with an array of colour options to meet your every need.

Warranty

Sheets with UV protection offer a 10-year warranty against yellowing, loss of light transmission and hail damage. Our sales department will be happy to provide you the exact warranty terms.

Fire behaviour

Fire safety is a fundamental necessity. **Ondatec** panels are tested in independent qualified laboratories on the basis of current applicable regulations in the construction industry. Our offices are at your disposal to provide you with details regarding the available certificates.

Thermal transmittance

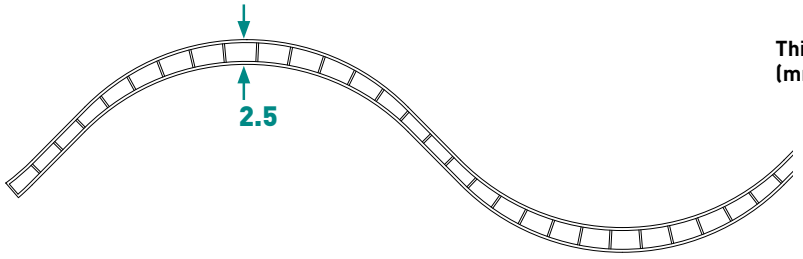
Thermal transmittance, or U-value, is the mean flow of heat per m^2 that passes through a structure (the polycarbonate panel) separating two environments with different temperatures (usually separating a heated or air-conditioned room from outdoors). The lower this value, the more effective the insulation offered by the panel. With a view to reducing heating/air-conditioning costs - with a consequent reduction in harmful emissions into the atmosphere - international standards require both building materials and fenestration systems to meet ever-stricter thermal transmittance requirements. With its extensive range of multiwall panels, **Stabilit Suisse** is at the cutting edge when it comes to providing its customers with the most appropriate solutions in compliance with current standards.

UV protection

Our co-extruded UV-protected layer blocks damaging UV rays that would lead to rapid degradation that causes yellowing and undermines the strength of the exposed surface. UV protection is applied using co-extrusion technology, whereby an even shielding layer can be produced to screen the polycarbonate from the UV component of the solar radiation. With this technology, the UV protection is made resistant to weathering and is not prone to damage by incorrect maintenance.

Ondatec 76/18/2.5 mm

Ondatec 177/51/6 mm is a Multiwall panel of 2.5 mm thick which enables an easier longitudinal and transversal overlapping. Full-light roofing, even combined with other products of identical shapes, can be realized. This product can be supplied with heat-sealed ends. The simplicity of use and the easy handling of the product make the **Ondatec** sheets ideal for the DIY world. **Ondatec 177/51/6 mm** has a coextruded layer of UV protection.

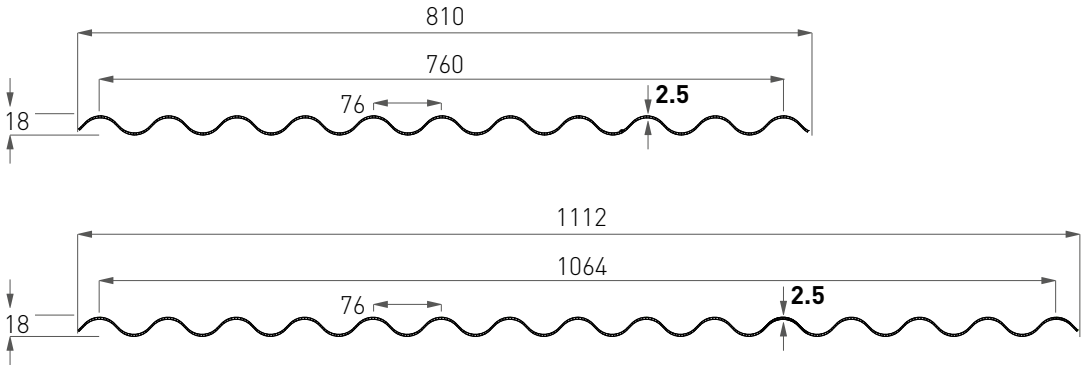


Thickness (mm) **2.5**

Ondatec 76/18/2.5 mm technical data			
Thickness	2.5 mm		
Number of walls	2		
Wave pitch	76 mm		
Height	18 mm		
Width	**11 waves**: 810 mm (useable width 760 mm) **15 waves**: 1112 mm (useable width 1064 mm)		
Length	upon request (maximum recommended length 6 m)		
Thermal transmittance	4,5 W/m^2 K		
Colours		**LT***	**G Value**
	Clear (8005)	79%	-
	Opal (8121)	70%	-
UV protection	Coextruded on the external side		
Warranty	10-year warranty against hail damage, yellowing, loss of light transmission		
Service temperature	-40°C / +120°C		
Thermal expansion coefficient	0,065 mm/m°C (6,5 x 10^{-5} 1/K)		
Fire certification	EUROCLASS B s1 d0		

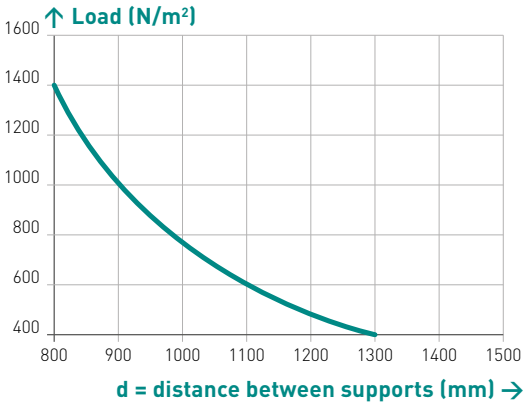
*** Values calculated according to ASTM standard.**

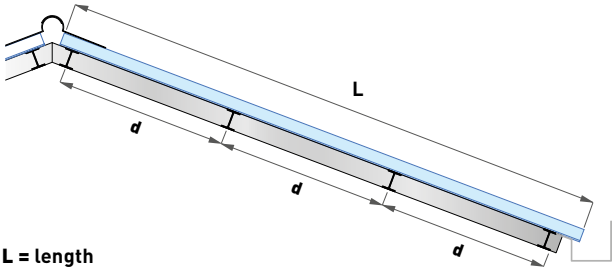
Ondatec 76/18/2.5 mm



Ondatec 76/18/2.5 mm load charts

- **Load chart with 3 or more supports for FLAT solution**





L = length
d = distance between supports

Uniform distributed load on 3 or more supports

The load tables refer to the breakage load value of the system, i.e. the lowest value between: the collapse of the panel, failure of the frame or the panel springing out of its housing. The designer will check the actual loads acting on the system as well as the coefficients of amplification and safety to be applied in consideration of both the climatic conditions of the site, both the general and particular characteristics of the structure in which the polycarbonate is inserted. For these evaluations, refer to the specific regulations in force in each country. For detailed technical data, or for more information, refer to the Technical Manual or to the Stabilit Suisse Office.

Ondatec 76/18/2.5 mm specifications
Construction of a flat translucent roof and / or skylight consisting of:
Ondatec 76/18/2.5 mm corrugated multiwall panel, external co-extruded UV protection, 2 walls structure, 2.5 mm thickness, wave height 18 mm, thermal transmittance 4,5 W/m² K, clear or opal colours, thermowelded ends; dimensions: panel width 1112 mm or 810 mm (usable width 1064 mm or 760 mm), length upon request,10-year warranty. Spacer in PE foam to be positioned between Ondatec panel and support.

Ondatec 177/51/6 mm

Ondatec 177/51/6 mm is a corrugated multiwall panel designed to be used for roofs and vertical walls in industrial buildings. Ondatec panels perfectly match the fibre cement roof panels: this enables the creation of both ridge-to-gutter skylights and spot lights in the middle of pitched roofs, as well as continuous roofs thanks to the perfect possibility of longitudinal and transversal overlapping. The panel can be supplied with a UV-resistant coextruded transparent gasket, able to increase the air and water tightness performance. Ondatec **Ondatec 177/51/6 mm** can be personalized with optional work processing for special uses (i.e. cutting of side corners).

LL

PLUS

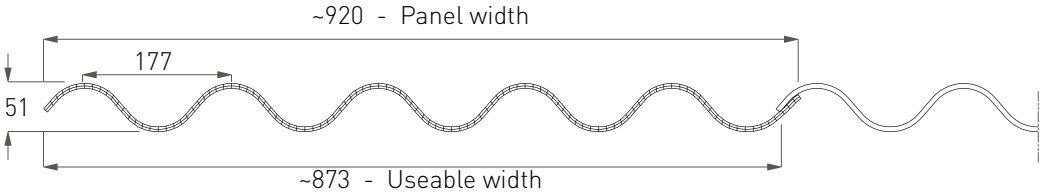
Thickness (mm) **6**

Ondatec 177/51/6 mm technical data			
Thickness	6 mm		
Number of walls	3		
Wave pitch	177 mm		
Height	51 mm		
Width	**5½ waves**: 920 mm (useable width 873 mm) **6½ waves**: 1097 mm (useable width 1050 mm) **7 waves**: 1180 mm (useable width 1062 mm)		
Length	upon request (maximum recommended length 6 m)		
Thermal transmittance	3,3 W/m^2 K		
Colours		**LT***	**G Value****
	Clear (8005)	72%	65%
	Opal (8121)	60%	46%
UV protection	Coextruded on the external side		
Warranty	10-year warranty against hail damage, yellowing, loss of light transmission		
Service temperature	-40°C / +120°C		
Thermal expansion coefficient	0,065 mm/m°C (6,5 x 10^{-5} 1/K)		
Fire certification	EUROCLASS B s1 d0		

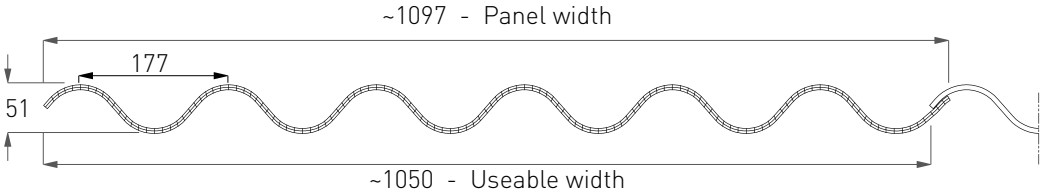
***Values calculated according to ASTM standard.**

*** Values calculated according to internal method.**

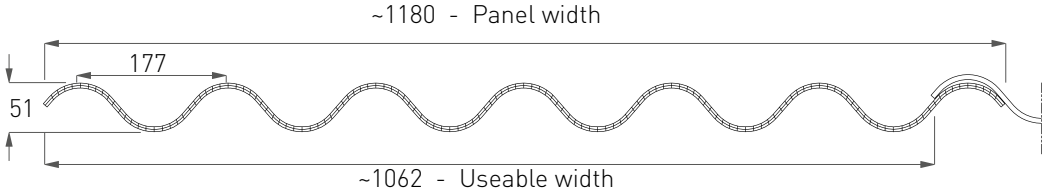
Ondatec 177/51/6 mm - 5½ waves



Ondatec 177/51/6 mm - 6½ waves



Ondatec 177/51/6 mm - 7 waves



Ondatec 177/51/6 mm specifications

Construction of a flat translucent roof and / or skylight consisting of:

Ondatec 177/51/6 mm corrugated multiwall panel, co-extruded UV protection on the external side, 3 walls structure, 6 mm thickness, wave height 51 mm, thermal transmittance 3,3 W/m^2 K, clear or opal colours, thermowelded ends; dimensions: panel width 920 mm, 1097 mm or 1180 mm (useable width 873 mm, 1050 mm or 1062 mm), length upon request; 10-year warranty.

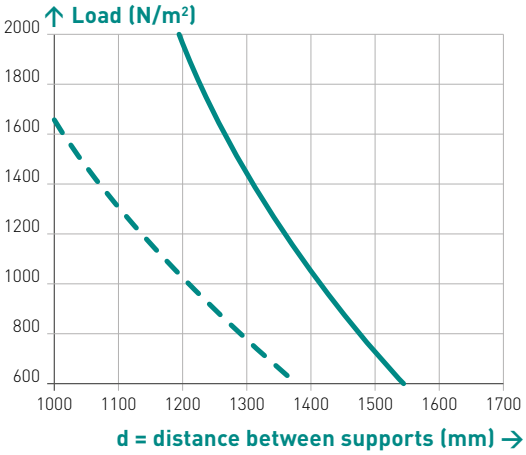
The panel can be supplied with UV-resistant coextruded transparent gasket, to increase the performance of air and water tightness.

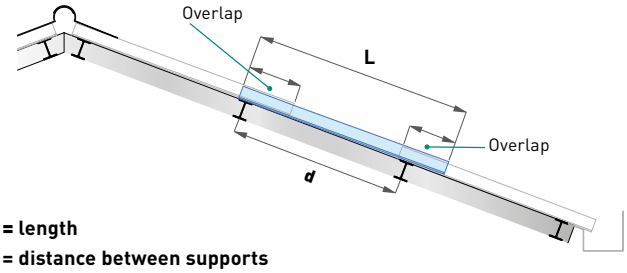
Spacer in PE foam to be positioned between Ondatec panel and support.

Metal half-ridge cover (upon request).

Ondatec 177/51/6 mm load charts

• Load chart for FLAT option - 2 supports

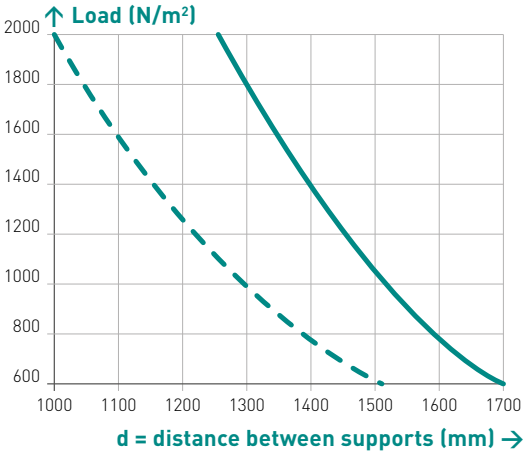


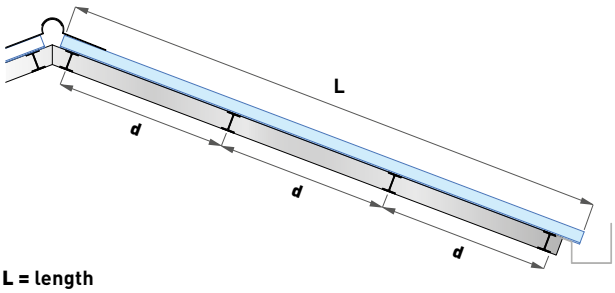


L = length
d = distance between supports

Deflection limit D/50 – – –
Deflection limit 50 mm ——

• Load chart with 3 or more supports for FLAT solution





L = length
d = distance between supports

Deflection limit D/50 – – –
Deflection limit 50 mm ——

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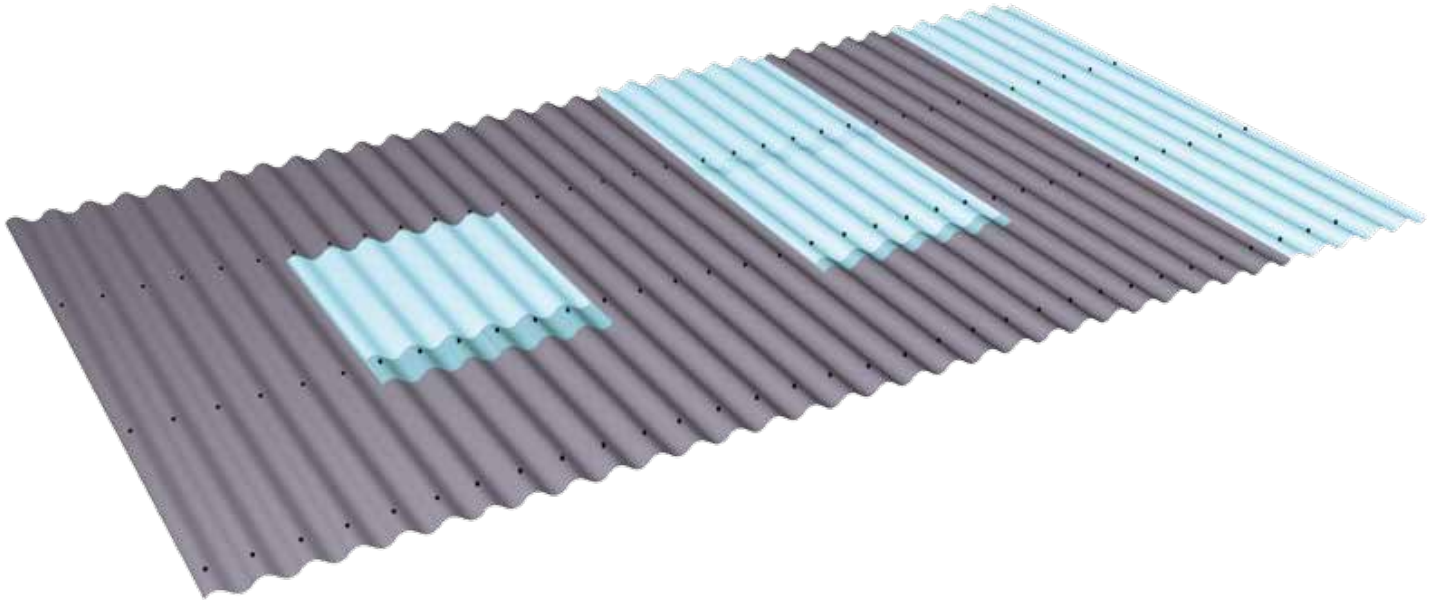
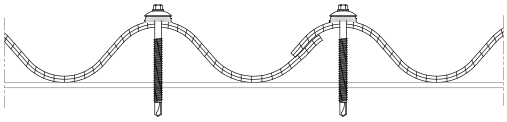
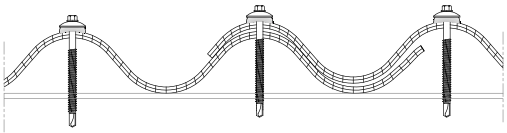
FLAT covering installation solution - Ondatec 177/51/6 mm

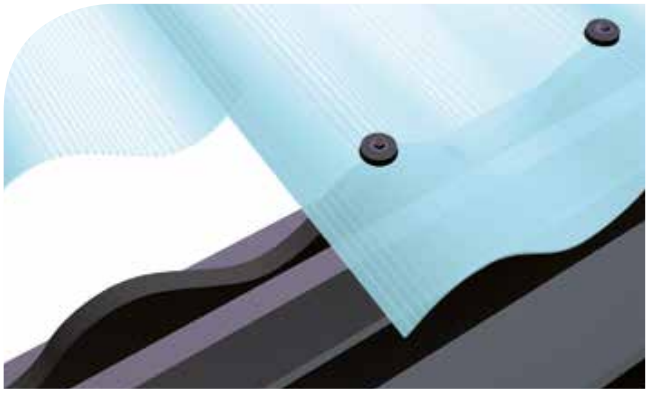




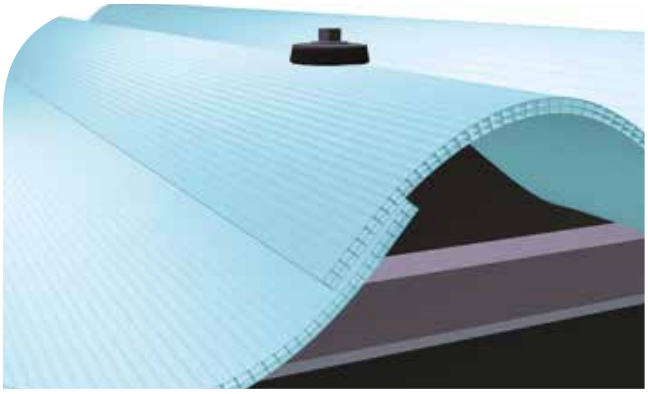
- Standard overlap



- Overlap for areas exposed to high winds



- **Detail with PE spacer**

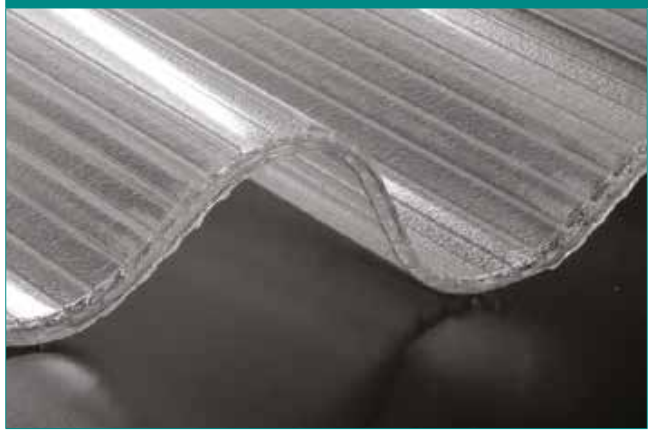


- **Detail for fixing and overlapping**

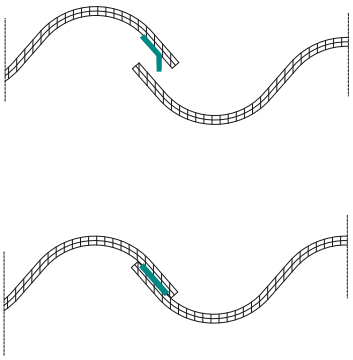
Ondatec 177/51 finishings

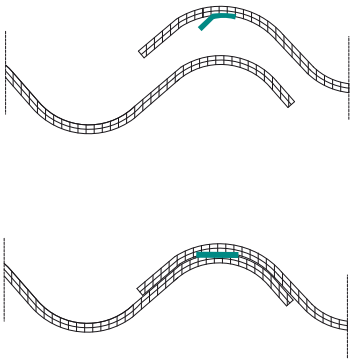
CORNER CUTTING

THERMOWELDING



INTEGRATED GASKET





Ondatec accessories

ACCESSORY	CODE	TECHNICAL DESIGN / RENDERING
Metal half-ridge cover for Ondatec 177/51/6 mm, length 1130 mm (upon request)	M9A3	
PE spacer for Ondatec 177/51/6 mm length 2000 mm	M9N7	
PE spacer for Ondatec 76/18/2.5 mm length 988 mm	M9N5	
Fixing screw with EPDM gasket	M9N0 - 6.3 x 45 mm	
	M9N1 - 6.3 x 60 mm	
	M9N2 - 6.3 x 80 mm	
	M9N3 - 6.3 x 100 mm