

Product description

Ondatec® is a corrugated multiwall polycarbonate panel designed to be used for roofs and vertical walls in industrial buildings.

Ondatec® contains a coextruded transparent UV resistant layer on the outside of the plate. The product is supplied with thermowelded ends to reduce the condensation and the accumulation of dirt of the inside of the structure.

Sector

Industrial / Commercial

Residential

Application

Discontinuous translucent flat roofs (ridge-to-gutter)

Translucent roof curve (self-supporting on roof)

Punctual Discontinuous Curve translucent roof

Continuous translucent flat/curved roofs with load structure.

Flat Discontinuous Translucent roof

Canopies

Advantage

High thermal insulation

Good light transmission

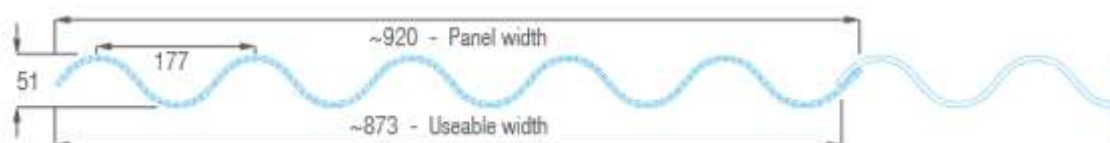
Easy and quick installation

Good coupling to insulation panels

Excellent impact resistance

Profile:

PROFILE: OK2/51-177/920 (5 ondas 1/2)



Technical characteristics

Properties	Value
Thickness	6 mm
Structure	3 walls
Weight	2,0 Kg/m ²
Useful width	873 mm
Total width	920 mm
Length	Maximum suggested 6 m
Light transmission	Clear: 72 % White Opal: 60 %
Thermal expansion coefficient	$6,5 \times 10^{-5} \text{ K}^{-1}$ (0,065 mm/m°C)
Thermal transmittance (U)	3,3 W/m ² K
Service temperature	-40°C a +120°C
Reaction to fire	BS1d0
UV protection	External side
Closing of heads	Thermowelding

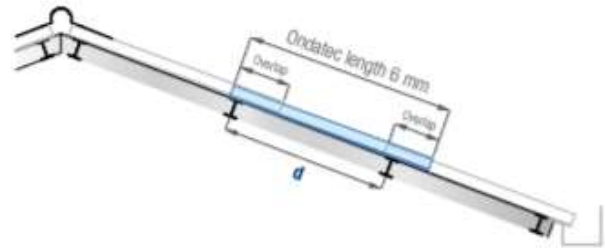
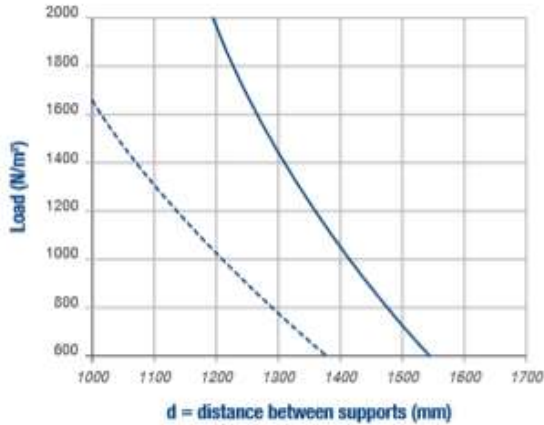
Certificates

- Reaction to fire certificate according to EN 13501-1. Classification obtained: BS1d0
- 10 years limited warranty

Admissible load:

- **Cubierta Plana.** Tabla de cargas para instalación plana, con placa con 3 o más apoyos.

Load chart for FLAT option - 2 supports

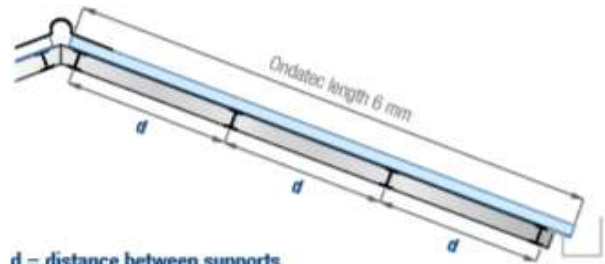
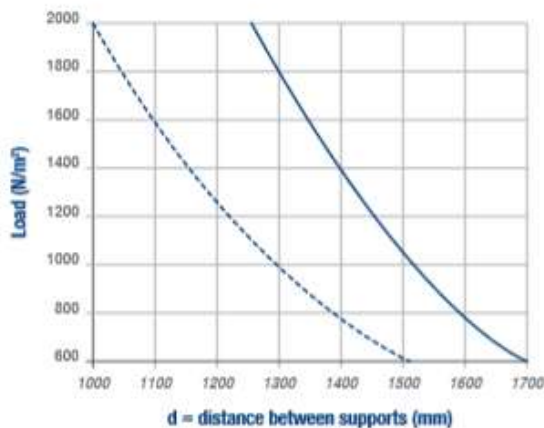


d = distance between supports

Camber 1/50 – distance between supports: -----

Maximum camber limit 50 mm: —————

Load chart with 3 or more supports for FLAT solution



d = distance between supports

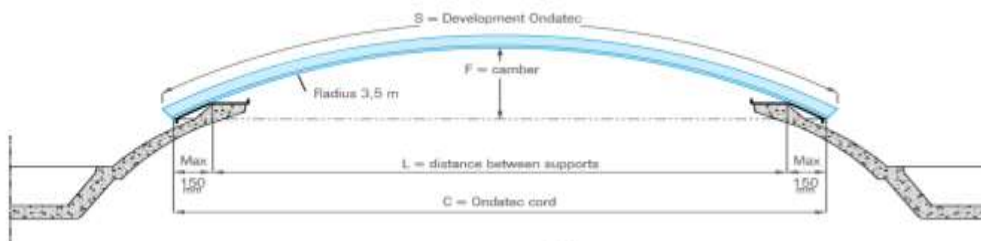
Camber 1/50 – distance between supports: -----

Maximum camber limit 50 mm: —————

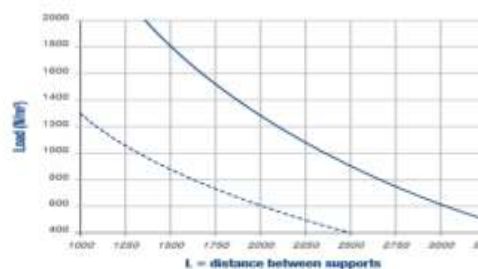
NOTE: minimum recommended slope 5%.

- **Curved roof**

Development of curved panel with a fixed radius of 3500 mm



Development table with fixed radius of 3500 mm						
Cord (C)	3530	2950	2400	2100	1800	1510
Development (S)	3700	3050	2440	2130	1830	1520
Camber (F)	480	325	210	160	120	80
Central angle (α°)	60°	50°	40°	35°	30°	25°
Measurements expressed in mm. Data are purely indicative.						



Single application: ----- Continuous application: —————

NOTE: For load values relative to the 6,0 m radius, please contact our offices.

Recommended installation



Fixation system

The fastening system must allow the free expansion of the sheet, therefore the rigid fixings or through bolts are not recommended.

Structure. The sheets require a transverse support structure that can be of any nature or geometry. In the modulation the maximum dimensions of the sheet must be respected according to the profile and the loads to be supported.

Support structure. The maximum separation between purlins must be determined for each profile, depending on the load to be supported and the maximum allowable deformation. In any case, it can never be higher than 1,20 m. In case of separations between important purlins (greater than 1.20 m), intermediate supports should be placed.

Dilation of the sheets. The coefficient of thermal expansion of polycarbonate is significantly higher than that of structures and other plastic products, therefore, it is essential to provide systems that allow the free expansion of the sheets. It is necessary to make drills with a diameter 3 mm greater than that of the screw.

Length of the sheets. The sheets of great length (more than 6 meters) accumulate longitudinal dilations of high absolute value so they should be avoided whenever possible.

In case of needing larger lights, transverse overlaps are recommended, from 15 to 20 cm depending on the slope of the roof.

Fixation of the sheets. The profiles can be drilled using standard drills and must be firmly fixed to avoid vibrations: taking special care when drilling at a right angle. The holes must always be made at a minimum distance of 50 mm from the edges of the sheet.

The washers must be of a sufficient diameter so that the clamping force can be distributed and keep the flat sheet for a good seal.

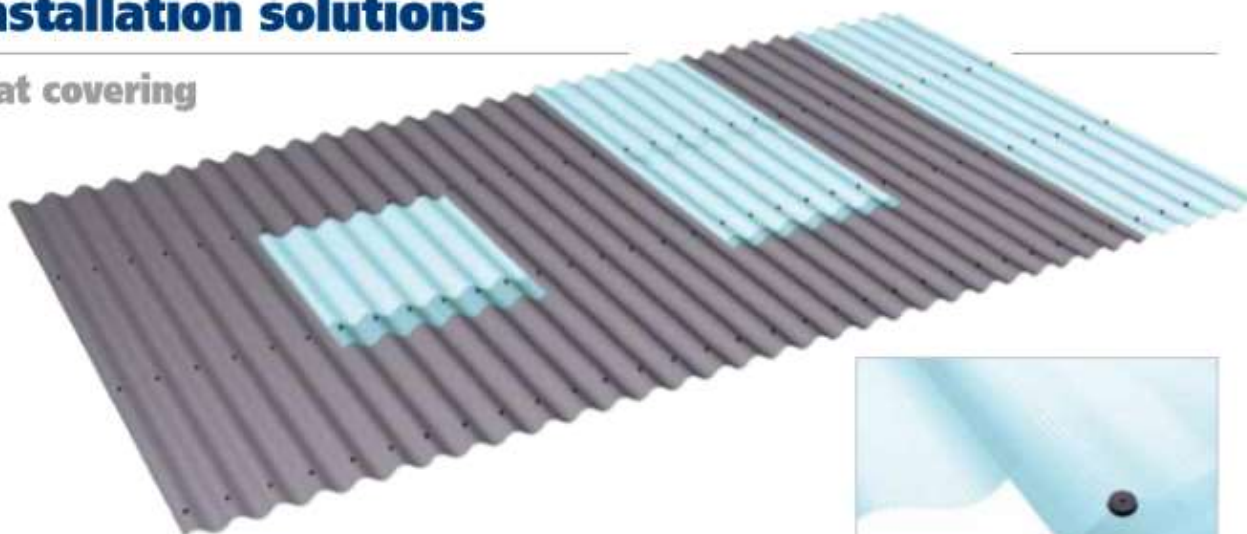


Overlap

The longitudinal overlap is made in the opposite direction of wind or rain. The transverse overlap must not be less than 200 mm above the purlin. Each sheet must overlap 100 mm from the purlin's fixing line

Installation solutions

Flat covering



Standard overlap 5½ and 6½ waves

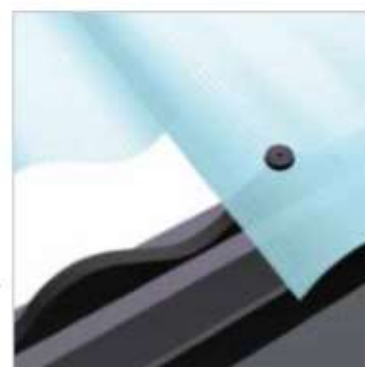


Overlap for areas exposed to high winds 5½ and 6½ waves

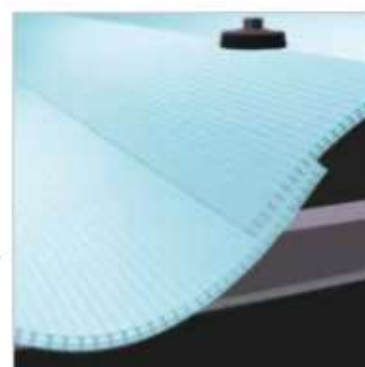


Standard overlap 7 waves





Detail with
PE spacer



Detail for
fixing and
overlapping



Ondatec 177/51 accessories

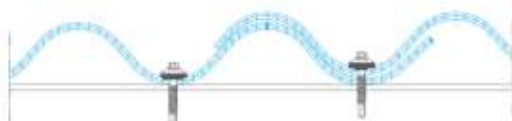
			
<p>Metal half-ridge cover</p>	<p>GRP header</p>	<p>PE spacer</p>	<p>Long / short fixing screw for high / low wave</p>

Installation solutions

Curved covering



Standard overlap 5½ and 6½ wave

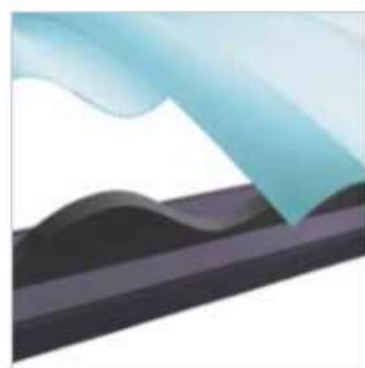


Overlap for areas exposed to high winds 5½ and 6½ waves



Standard overlap 7 waves

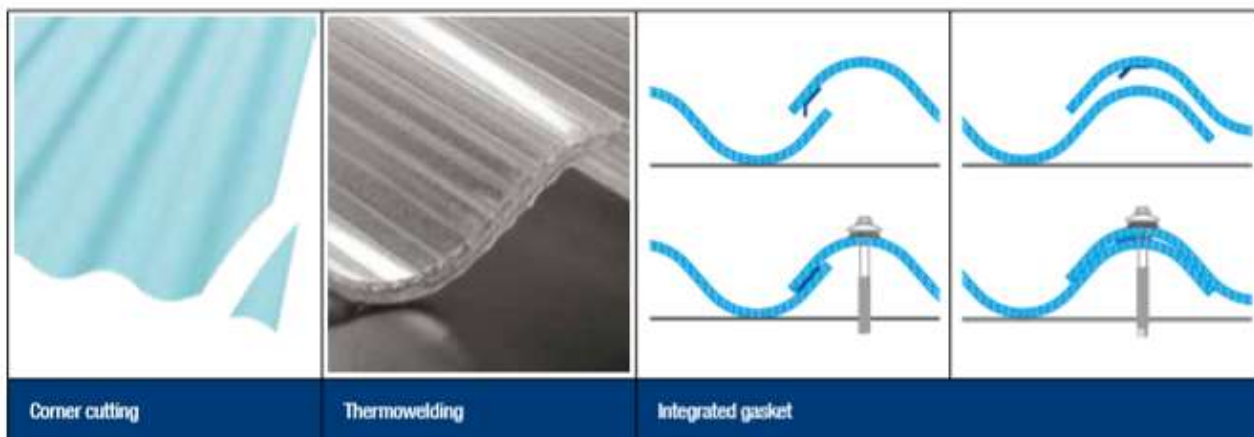
Detail with
PE spacer



Detail for
fixing and
overlapping



Ondatec 177/51 finishings



Storage and handling



KEEP SHEETS OUT OF THE RAIN

Sheets must be stored out of the rain to stop condensation forming inside the cells.



KEEP SHEETS OUT OF THE SUN

In the event goods need to be stored while still in their packaging, do not leave the pallet in direct sunlight as this could generate high temperatures inside the packaging and make it difficult to remove the protective film on the sheets later.



SHEETS HANDLING

Sheets must be handled with the utmost care to avoid damaging them with impacts or scratches, which would compromise the material's performance



SHEET STORAGE

You can stack sheets up to three packs or pallets high. To stop the product coming into direct contact with objects liable to cause damage, you should place spacers or planks between the packs or pallets and any such objects.



USING LIFT TRUCKS

For safer and easier handling, you should use lift trucks with forks that can be spaced at least 2 m. apart and are at least as long as the pack or pallet is wide. Exercise the utmost caution, handling the load carefully and avoiding sudden movements so as not to cause the material to rock or bump up and down excessively.



HANDLING BY HAND

If individual sheets are to be handled by hand, you will need at least two people to carry the sheet on its side. When picking the sheet up off the pack or pallet, you must lift it off cleanly so that it does not scrape against the one underneath and turn it to lie on its side next to the pack.

Installation instructions



ALLOW FOR THE POLYCARBONATE'S THERMAL EXPANSION

Sheets must be fixed so that they are retained by at least one whole cell length on each side; an allowance for the material's thermal expansion should be added to this measurement.



REMOVING PROTECTIVE FILM AFTER INSTALLATION

Sheets come with a protective film on both sides. There is a printed film on one side of the sheet to show you that this is the side to face out. Remove the film as soon as the sheets have been installed.



SHEET SEALING

Where sealing is necessary, only use silicone, sealants, gaskets and paints that are comparable with polycarbonate.



SHEET TAPING

Seal the ends of the sheets by applying adhesive aluminium tape to seal the cells and stop dirt getting inside the chambers.



SHEET CUTTING

Sheets can be cut using common cutting instruments, such as vertical, horizontal or circular cutters, or reciprocating saws, provided they are fine toothed.



SHEET DRILLING

Sheets can be drilled, provided suitable bits are used. Nonetheless, we do not recommend piercing the sheet with through fixings unless they are suitable slotted to allow for thermal expansion.

Maintenance



SHEET CLEANING

To care for sheeting, we recommend cleaning at least twice a year with water and non-alkaline detergents. Do not use abrasive equipment or solvents, which could damage the Surface of the sheeting



DO NOT WALK ON TOP OF SHEETS

Do not walk directly on top of sheets during installation. We recommend placing a suitable supporting element on top to distribute weight evenly

TECHNICAL DATA

Ondatec 6 mm

Profile OK2 (Wave 1 – 5 waves 1/2)

Translucent sheet

Code: TDS-D-06-OK2-g20

Inspection: 01

Valid from: 20/07/18

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