

Onduline®

Polycarbonate Corrugated Roof Sheet: Fixing Guide

Designed specifically to be integrated into Onduline Bitumen Corrugated roofs to provide natural light into your building. Alternatively the sheets are ideal for use as a durable, crystal clear roof covering on a wide range of buildings such as atriums, carports, summerhouses, canopys, garden and horticultural buildings.



Why select Onduline Polycarbonate Sheets?

Onduline Guarantee:

Onduline Polycarbonate Corrugated Roof Sheets are the only roof illumination sheets fully covered within the terms of the 15 year Onduline Corrugated Bitumen Corrugated Roofing Weathering guarantee. Whereas when used as a standalone crystal clear roof covering, they are covered by an independent 10 year Weathering Guarantee under normal service conditions.

Strength:

They provide superior durability and impact strength of up to ten times greater than comparable PVC sheets, making them highly resistant to climatic damage from hailstorms. Onduline Polycarbonate Sheets also provide outstanding resistance to high temperatures of up to 130° C.

Clarity:

Polycarbonate has superior resistance to harmful U.V. light transmission, whilst maintaining crystal clear clarity and is far less prone to discolouration during its service life than PVC sheets. The 10 year weathering guarantee also extends to the sheet clarity against yellowing or discolouration*.

Always refer to the Onduline Fixing Guide before fixing, the sheets must always be laid in accordance with the product fixing instructions. Our Technical Sales Department will be pleased to assist with your roof project enquiries.

www.onduline.co.uk



Preparation

It really is worth taking the time to first check your roof and carefully set out the design for the roof support structure on your project.

It will save you time and money!

New build project:

Just follow the instructions set out in this leaflet and construct the roof support structure in strict accordance with the Onduline bitumen sheet fixing guide to create a durable low maintenance roof on your building.

Existing roofs:

Survey your roof structure as this will allow you to decide if it requires maintenance, upgrading or strengthening prior to fixing the Onduline sheets.

Make a special note of the roof construction and check that existing purlins are fixed at centres suitable for Onduline Polycarbonate sheets. Many existing roofs provide insufficient support and unless additional support structure is provided this can significantly reduce the roofs service life.

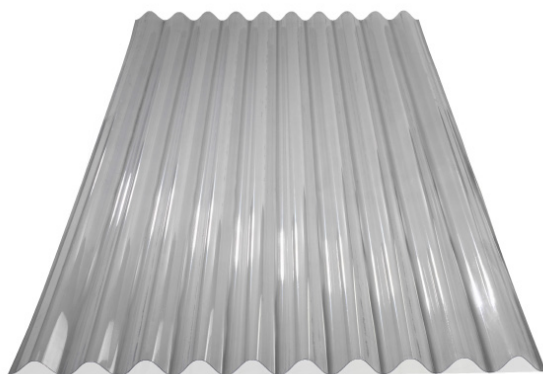
Recommended tool kit



- | | |
|-------------------------|--|
| 1 Hammer | 7 Fine toothed hand saw for plastics |
| 2 Tin snips | 8 Protective gloves, glasses & hat |
| 3 Knife | 9 Chalk line reel and marking pencil |
| 4 Tape measure | 10 Electric circular saw fitted with a fine diamond grit blade for plastics. |
| 5 Spray lubricating oil | 11 Electric drill fitted with 8 mm high speed drill to pre-drilling guide holes. Impact driver fitted with Phillips headed bit (HEX 1/4" PH N02) as required to fix the Onduline screws. |
| 6 Spirit level | |

Note: Tools specific to fixing PC Sheet in bold

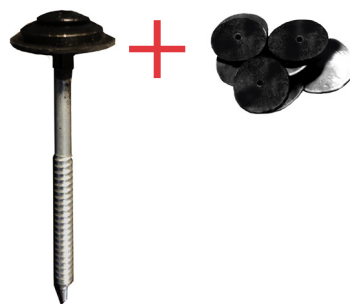
Materials you will need



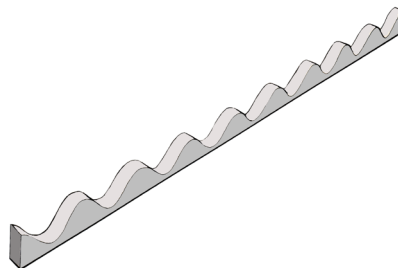
Onduline Polycarbonate Sheets:

Sheet dimensions (Nominal):

- Sheet size: 2.000 m x 0.950 m
- Corrugation height: 38 mm
- Thickness: 1 mm
- Fixings per sheet: 20
- Coverage on roof slopes of 15° degrees; or greater; 1.800 m x 0.855 m = 1.54 m² per sheet.

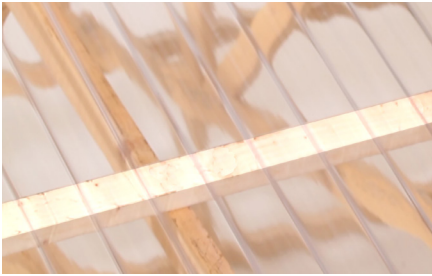


Onduline PC Screw Fixings Packs are supplied with 20 mm EPDM washers packs (Minimum of 20 screws per sheet are required).



Onduline White Corrugation Support Filler for use with all Onduline Plastic sheets:
Length: 855mm cover width of sheet.

Fixing Onduline Polycarbonate Roof Sheets



Preparation: Timber purlins

When fixing onto timber purlin first apply white acrylic paint or suitable reflective tape to protect the timber purlins from over heating in service.



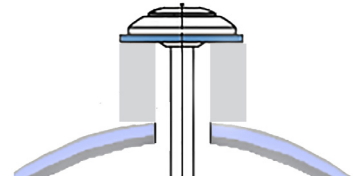
Sheet Fixing points

Fix each corrugation at the eaves and sheet end laps, either side of the sheet side laps and then on alternative corrugations on the intermediate purlins.



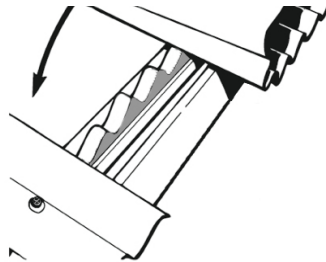
Laying Onduline PC sheet

As the UV radiation protection is on the sheets top surface it is essential they are always fixed in the correct orientation with the end corrugation facing down.



Preparation: Onduline Screws

First thread the 20 mm EPDM washer supplied with the screw pack onto the screw shank. This is to increase the weathering area and allow for movement.



Onduline White Corrugation Fillers:

We recommend corrugation fillers are laid onto rafters prior to fixing sheets to add support during fixing and counteract thermal movement noise in service.



Fixing PC sheets in Onduline roof:

When fixing PC sheets with Onduline Bitumen Sheets always lap the Bitumen Sheet onto the PC sheet. Never lap the PC sheet onto the darker surface.



Fixing at the Eaves:

Always allow for a 5cm sheet overhang from the fascia. This provides a water shed point for rainwater into the rainwater collection system.



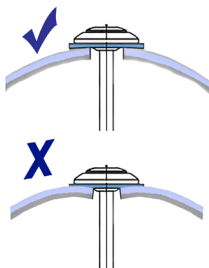
Marking fixing points

Mark out the fixing points onto the corrugations in accordance with the Onduline Sheet fixing instructions using a suitable marker.



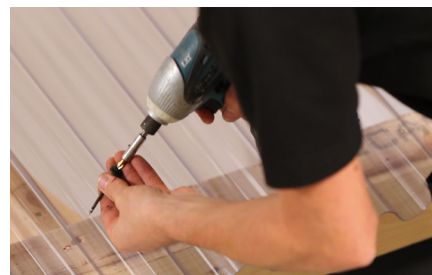
Pre-drilling fixing points:

Pre-drill the fixing points through top of corrugations to allow for thermal sheet movement using an 8 mm high speed drill rated for plastic applications.



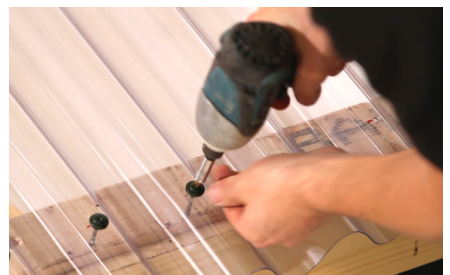
Preparation: Onduline Screws

Fix using Onduline Universal Screw Fixings and EPDM washer, taking care not to overtighten against the sheet corrugation for thermal movement in the sheets.



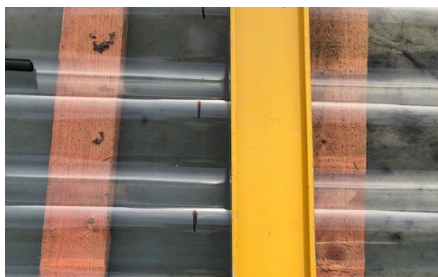
Positioning Onduline Screws

Engage screw with a Phillips headed bit (HEX 1/4" PH N02) and position screw centrally through the pre-drilled guide hole.



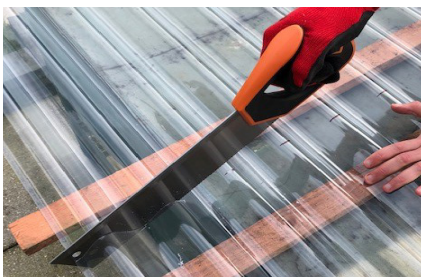
Fixing Onduline Screws

Carefully screw the fixing into place, ensuring the fixing is square to the purlin taking care not to overtighten the fixing.



Cutting PC Sheets with handsaw

To cut with hand saw, mark the cut line and support the sheet either side. This restricts its movement against the blade when cutting.



Cutting PC Sheets with handsaw

Cut sheet using a fine toothed hand saw, sawing at a shallow angle using a slow steady stroke motion. Take care to keep the sheet stable during this process.



Cutting with power tool

Cut using a rotary power saw fitted with a plastics rated fine diamond grit blade. Alternatively use a jig saw set at high speed, with a fine toothed plastics saw blade.

Handling and Storage:

The sheet should be handled and stored carefully for although they are highly resilient to mechanical damage the surface can still be damaged and scratched by inappropriate handling.

Store the sheets inside in a cool, dry location protected from exposure to sunlight to avoid detrimental heat build-up within stacked sheets.

Maintenance Instructions:

Onduline Polycarbonate Corrugated Roofing Sheets must be periodically cleaned of all leaf and related debris from the roof and rainwater collection systems. Clean by first using a hose to remove loose surface debris from the roof (We do not recommend the use of high-pressure washers which can cause damage to roof flashings and fixings), Then clean using a sponge or soft micro-fibre cloth. Apply household soap detergent or suitable proprietary cleaning fluid mixed with hand-hot water to the surface to remove surface dirt from the sheet surface.

Warning:

Do not use abrasive or solvent based cleaners or clean using course headed scrubbing brushes or metal scrappers as they can cause abrasion damage to the sheet surface. Do not clean the roof area when subjected to direct exposure to sunlight resulting in high temperatures. Complete the cleaning process by rinsing off with clean water and allow to dry.

Contact the Technical Department for advice to remove paint and other contaminants from Polycarbonate sheets or for advise on using rainwater run-off collection from the roof.

* Terms and Conditions apply.

WARNING: Working on roofs at heights can be hazardous. Always work from a secure ladder or platform and use the appropriate safety equipment. Guidance can be found in Health and Safety Guide HSG33 working on roofs.

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