

Onduline®

Fixing Guide



Onduline Fixing Guide

Introduction

Onduline is the world's largest manufacturer of bituminous corrugated sheets. Onduline roofing sheets are easy to handle and simple to fix. This fixing guide sets out the correct fixing method and illustrates how Onduline accessories can be used to provide simple solutions to meet your design requirements.

Please take the time to study these simple instructions to ensure the roof is both set out and installed correctly insuring a durable and trouble free service life for your roof.

Onduline Material Composition

Onduline is a bituminous corrugated roofing sheet developed continuously over 50 years to provide outstanding weathering performance. It is manufactured from a mono-layer of organic fibres impregnated with bitumen under intense pressure and heat. The colour pigmentation system "stains" the colour into the sheet with a UV resistant resin. The resulting sheet is flexible, durable and versatile, with excellent weathering and colour retention properties compared to conventional painted sheets.

Sheet Specification:

Sheet size: 2 x 0.95m

Weight: 6.4kg

Corrugation size: 95 x 38mm

Thickness: 3mm

Colours: Black, Green, Red, Brown.

Note: Take care to fix Onduline sheets the correct way up. The underside is easily identified by its dimpled rough surface finish whilst the topside of the sheet has a smoother textured finish. Check the sheet is a genuine Onduline product all sheets are marked with Onduline brand I.D.

Benefits:

- Guaranteed waterproof for the first 15 years*
- Easy to fix and handle, requiring no specialist trade skills or equipment
- Contains no asbestos and presents no health hazard
- Durable; rot and fungi resistant
- Withstands windspeeds up to 120mph (192kph)

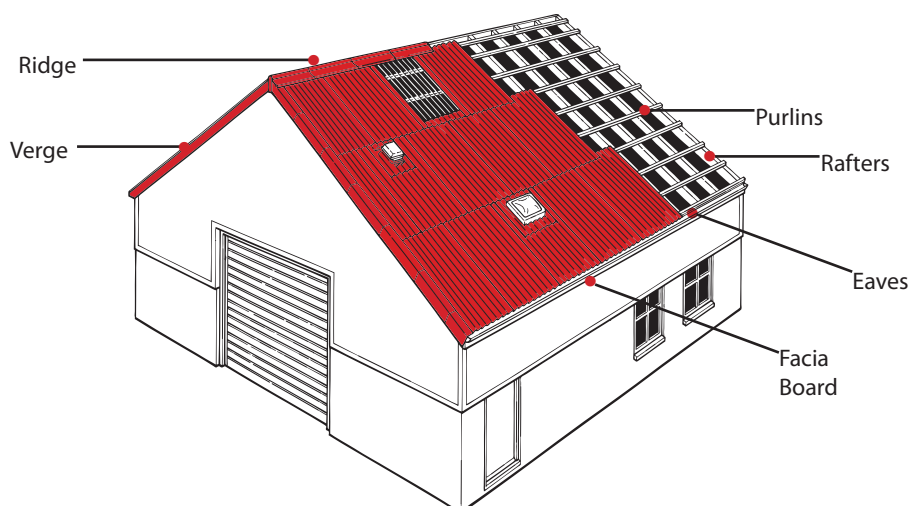


Sheet Topside



Sheet Underside

Building Notation:



*Terms and conditions apply

Onduline roof support design

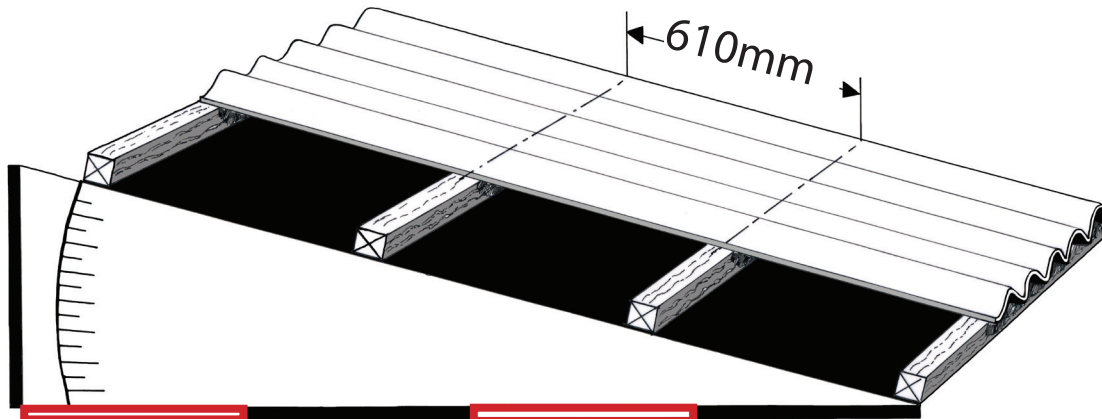
IMPORTANT:

It is essential that the correct support be applied to the Onduline sheets.

Consult the illustrations below to set the correct fixing specification. First establish the roof pitch. You can then check if a decking is required or at what centres the purlins should be fixed.

Finally note the sheet end and corrugation side laps and set out the roof accordingly.

Roof Pitch: 15° and over



Gradient: 1 in 4 or less

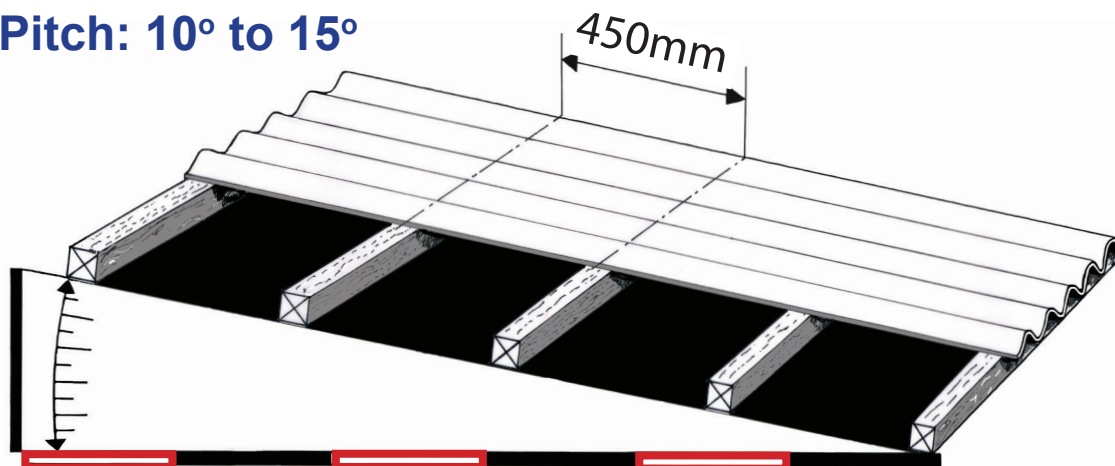
Support: Purlins fixed at maximum span of 610mm.

End Lap: 170mm **Coverage per sheet:** 1.56m²(nominal)

Side Lap: 1 Corrugation

Fixings: 20 per sheet

Roof Pitch: 10° to 15°



Gradient: 1 in 6 to 1 in 4

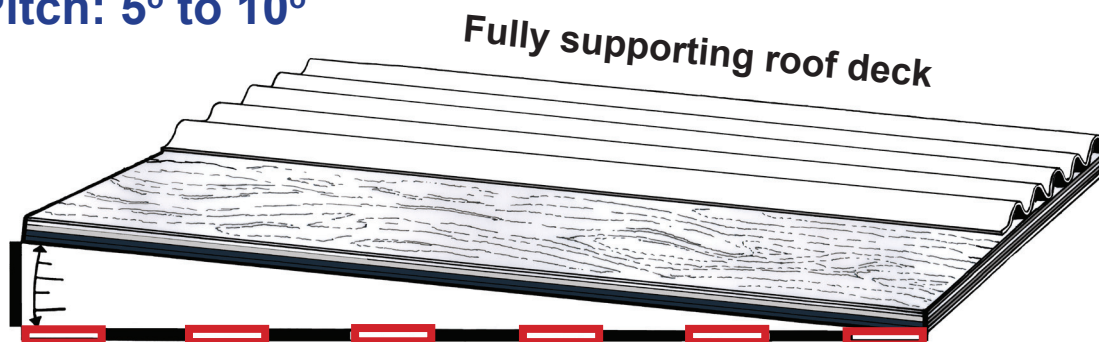
Support: Purlins fixed at maximum span of 450mm.

End Lap: 200mm **Coverage per sheet:** 1.54m²(nominal)

Side Lap: 1 Corrugation

Fixings: 25 per sheet

Roof Pitch: 5° to 10°



Gradient: 1 in 6 to 1 in 11

Support: Purlins overlaid with fully supporting roof deck.

End Lap: 300mm **Coverage per sheet:** 1.29m²(nominal)

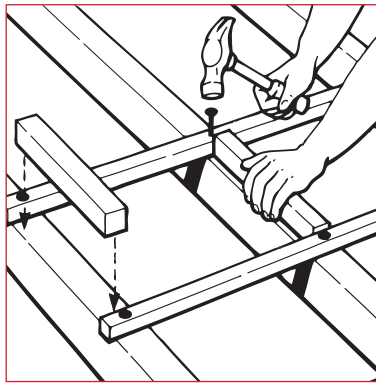
Side Lap: 2 Corrugation

Fixings: 20 per sheet



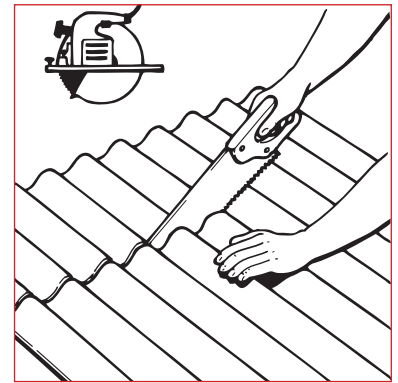
Fixing Guide

To get the best from Onduline sheeting it is essential to fix it in accordance with these fixing instructions. To identify the technical terms referred to, consult the drawing on page 2.



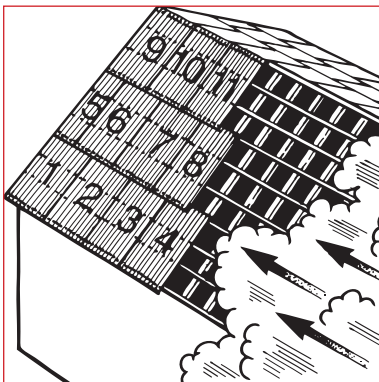
1. Setting Out

Purlins must be of sufficient section to give support between the rafters. Set purlin centres as detailed on the previous page 3, use spacers to keep the purlins square.



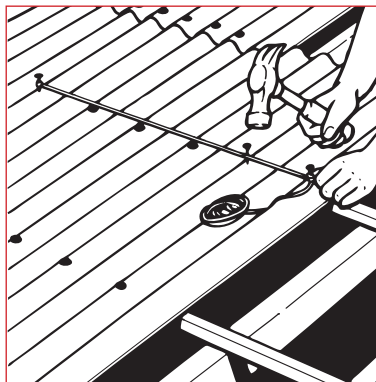
2. Cutting

First mark out the sheet then cut with an oiled coarse-toothed handsaw or preferably a power circular or skill saw.



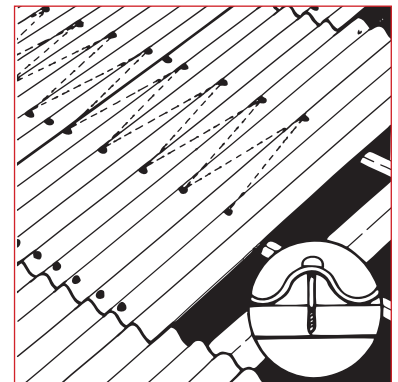
3. Sheet Layout

Start fixing sheets at the opposite end of the roof from the prevailing winds. Cut a sheet in half vertically and use to lay sheet courses in a broken bond pattern.



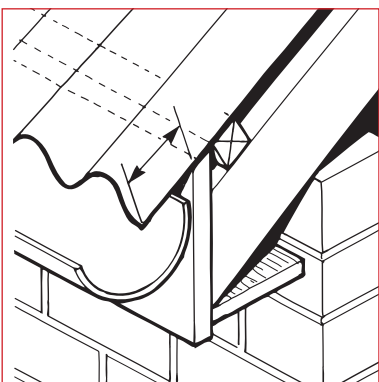
4. Nailing

Only use Onduline PP or Safetop nails on timber; check you have correct side and end sheet laps. Use a string line to keep fixings in line.



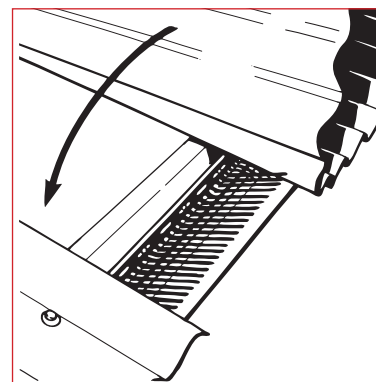
5. Nailing

Nail sheets every corrugation at the eaves and sheet overlaps and either side of vertical joints. Nail every other corrugation on intermediate purlins.



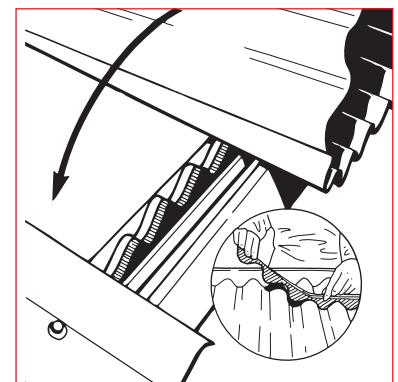
6. Eaves Detail

The maximum sheet overhang at the eaves is 7cm. Reduce the distance of the first purlin from the fascia accordingly.



7. Eaves Ventilator Strip

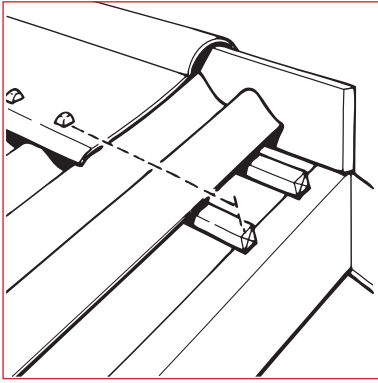
Fixed to the eaves purlin it stops ingress of birds and large insects, whilst allowing free airflow.



8. Corrugation Filler

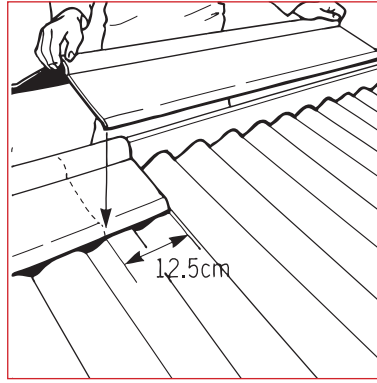
Seals corrugations at eaves and ridge from penetration of sand and dust into the roof space.





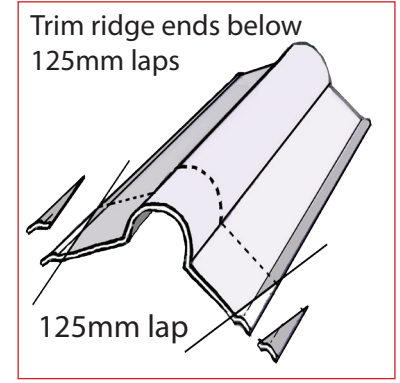
9. Ridge Unit Fixing

Fit ridge board and support purlin. Fix second purlin, its position being dictated by the roof pitch. The sheet / ridge can then be fixed.



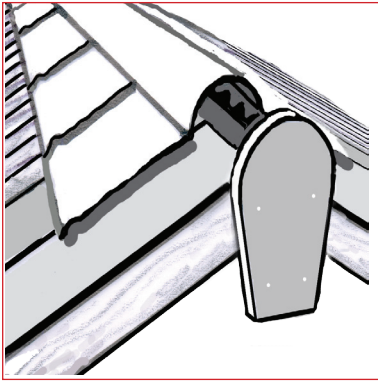
10. Ridge Unit Fixing

Start fixing the ridge at the opposite end of the roof from the prevailing winds and form a 125mm overlap. Use a string line to align and nail at every corrugation fixing one side first.



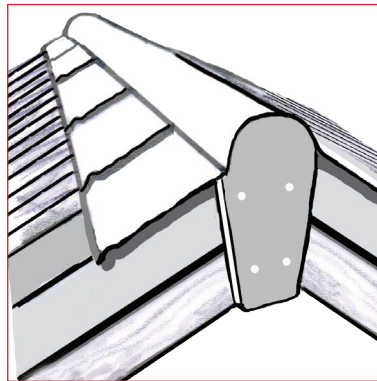
11. Advanced Ridge Fixing

Option: To provide a smooth ridge line, the end of the ridge unit below the lapped portion can be trimmed before fixing to reduce the visual impact of the formed lap.



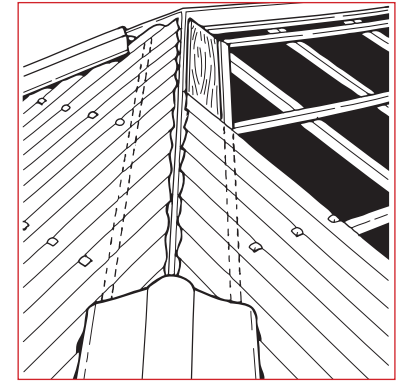
12. Ridge End Finial Cap

Option: The end run of the ridges at the verge can be closed by fabricating a timber finial piece by marking and cutting the top radius matching the radius of the ridge.



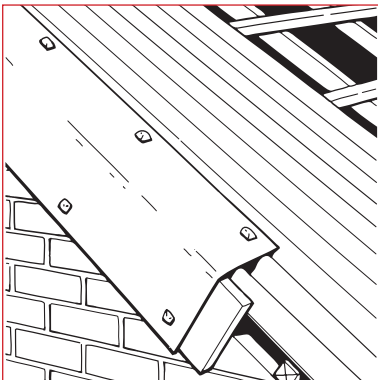
13. Ridge Unit Fixing

The finial piece is then screwed to the barge boards over the verge units and the ridges can be overlaid onto it to seal the end of the ridge line.



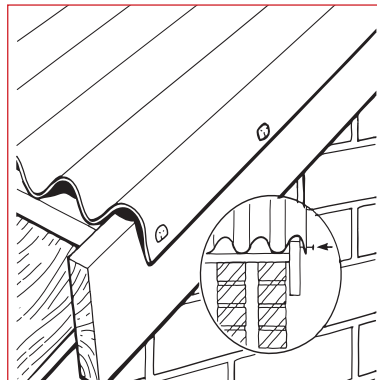
14. Hip Detail

Fix hips before ridge. Lay support boards and trimming purlins. Nail ridge units to trimming purlins, cut and dress units to ridge line with tin snips and overlay with ridges.



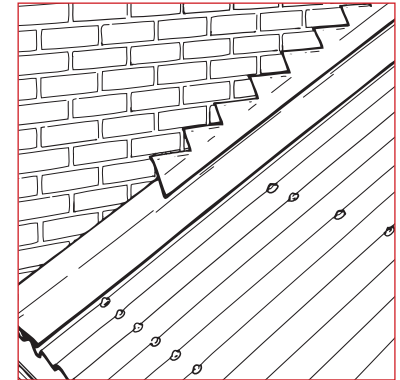
15. Verge Fixing

Fasten timber barge board level with the top of finished Onduline roof. The Onduline verge units are then overlaid and nailed into position.



16. Verge Fixing

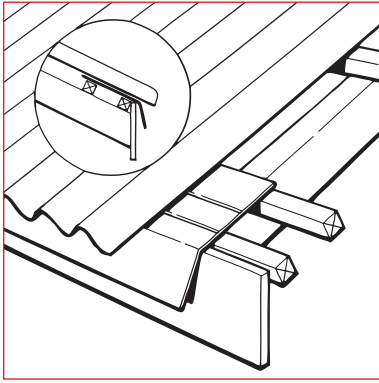
Alternatively, fix barge board level with the underside of the Onduline corrugation and overhang corrugation. Fold down and nail in position.



17. Side Wall Abutment

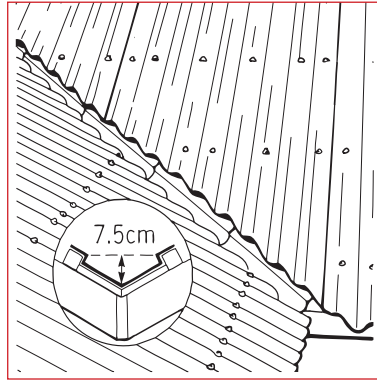
Form side wall flashing to Onduline roof, using Onduline flashing tape or similar and fix separate cover flashing to the wall.





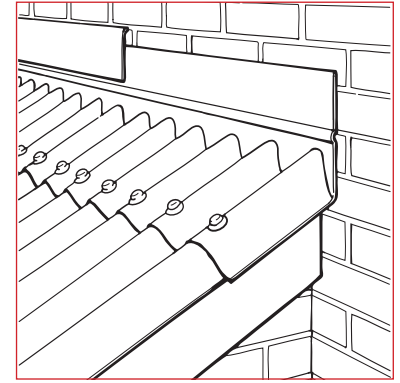
18. Eaves Tray

Developed for use with the Oversheeting and Ondutile systems, the eaves tray can also be used to reduce sheet overhang at the eaves.



19. Onduline Valley Lining Units

Fix valley boards/trimming purlins and line with either Onduline, metal, or GRP performed liner units. The vertical valley depth should be 7.5cm.



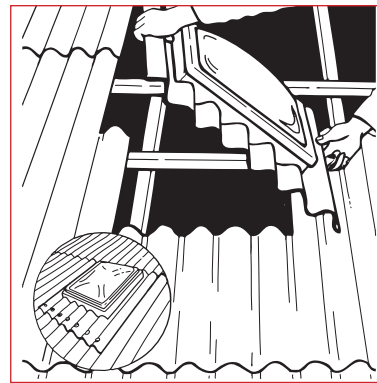
20. Abutment Flashing

Use Onduline pre-formed apron flashing to seal end wall abutments. Use separate cover flashing to the wall to allow for movement.



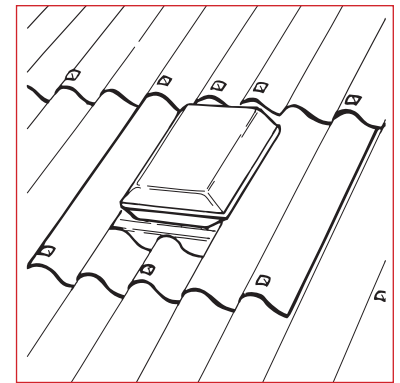
21. Roof Lights

Onduline PVC roof lights are easily fixed for natural illumination. They require pre-drilling before nailing into position.



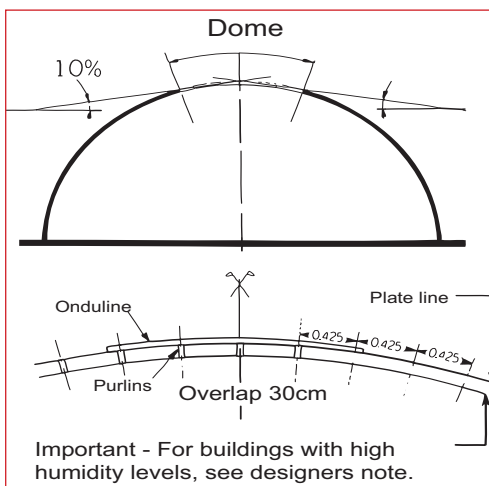
22. Roof Window

Provides illumination and ventilation but does not reduce the thermal insulation performance of the roof. Cut opening in sheet and nail into position.



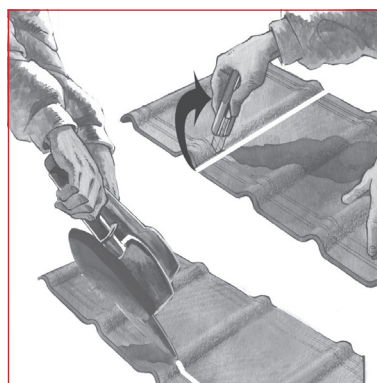
23. Roof Ventilator

Roof ventilators are available in two sizes to provide increased ventilation. Simply cut opening in sheet and nail into position.



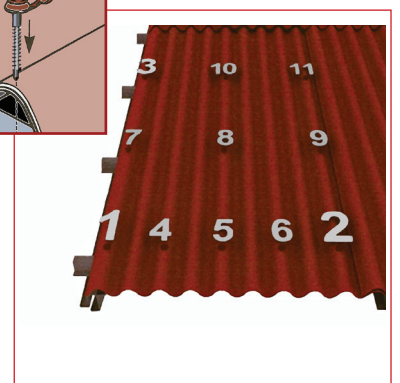
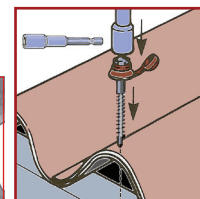
24. Curved Roof Detail

The peak of the curve supported on purlins laid at 425mm centres, or on buildings with high humidity on close boarding or fully supporting deck. The Onduline sheets laid with double corrugation side lap and 30cm end lap. Purlins on side walls revert to 61cm with ventilation provision as required.



25. Ondvilla and Compact Tile Strips

The new range of tile strips offer an exciting new range of small modular roofing elements making it even easier to handle and fix. Ask the sales office for separate fixing details.



26. Fixing to Metal Framed Roofs

Fix Onduline to steel structures using drill screws and safetop large headed washers. Use 5 fixings at the eaves, sheet laps and ridge with 3 fixings on intermediate purlins as illustrated above.



Onduline design notes:

Condensation:

Onduline is resistant to the build up of condensation. However any single thickness roofing material is at risk of condensation formation during the winter months. Generally, air movement generated by the installation of high and low level ventilation will avoid this problem. Onduline ventilation accessories will assist in this provision.

The risk of condensation can be further reduced by fixing an Ondutiss underlay membrane on a 12mm plywood deck fixed over the purlins set to 610mm centres to accept the Onduline nails when fixing the Onduline sheets. This is particularly important on buildings with high humidity levels. Insulation can also be easily incorporated too providing ventilation is provided below the Onduline sheet, Design advice should be sought from the manufacturer of the insulation products in this case.

Caution:

Covering of roofs can be hazardous. All work must be carried out with due regard to Health and Safety regulations in accordance with HSG 33 working on roofs.

Maintenance:

To ensure long life the roof should be cleaned regularly of leaves and debris, as leaf mould can reduce the effective life of the product. Also check that tree and shrub branches are not in contact with the surface of the roof; as wind generated movement can cause surface damage to the sheets.

Guarantee:

The Onduline system is guaranteed to remain weatherproof for fifteen years when fixed and maintained in accordance with the fixing instructions. The guarantee is limited after five years service to the pro-rata replacement value of the Onduline materials set against the service life measured in annual increments and does not extend to labour, related construction or third party costs.

Fire resistance:

Onduline PP sheets are not classified to External S.AA fire rating as required in UK Building Regulations for some classes of building such as housing. In these cases they must be fixed on a suitable fully supporting roof deck and the sheets coated with a proprietary AA surface paint treatment (as used for bituminous felted flat roofing), applied in accordance with the paint manufacturers instructions.

Literature:

Comprehensive literature is available giving full details of the Onduline product range and conditions of use. The Sales department will be pleased to supply you with copies or assist you in specific enquiries.

www. **Onduline** .net

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Manufactured in compliance with European Union Directives
Marked M23 & M22 in force of the European Commission
Product Directive 90/269/EEC and other relevant European Directives
Date 25.11.2005
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Avis technique
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