

Onduline®

Fixing Guide

**“No other
roofing material
is so easy to
handle and so
simple to fix.”**



Introduction

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

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.

- Guaranteed waterproof for the first 15 years.
- Easy to fix and handle, requiring no specialist skills or equipment.
- Contains no asbestos and presents no health hazard.
- Durable, rot and fungi resistant and requires practically no maintenance.

ONDULINE APPLICATIONS

Onduline's versatility makes it ideal not only for conventional mono and duo pitched roofs, but also for a wide range of specialist applications. Contact the Sales Office for further details.

Curved roofs.

The flexibility of the Onduline sheets makes them perfect for curved roof projects (see illustration 22).

Oversheating system.*

Onduline's light weight makes it ideal for overheating existing deteriorated corrugated or felted roofs.

Onduline underlay system.*

Onduline forms a tough secondary roof under tiles and slates, allowing them to be used below the manufacturer's minimum recommended pitch.

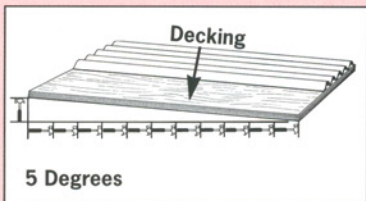
Vertical cladding.

Onduline is used extensively as a wall cladding and rain screening material.

* Specific leaflets are available for these systems.

ROOF SUPPORT STRUCTURES

It is essential that the correct support be given to Onduline sheets. Use these tables to avoid problems. 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 lap.



ROOF PITCH

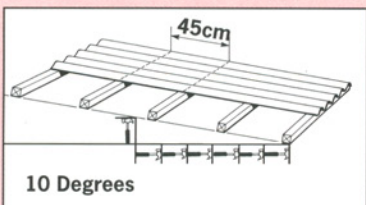
5° to 10°

SUPPORT: Decking or close boarding.

END LAP: 30cm

SIDE LAP: 2 corrugations

GRADIENT: 1 in 11 to 1 in 6



ROOF PITCH

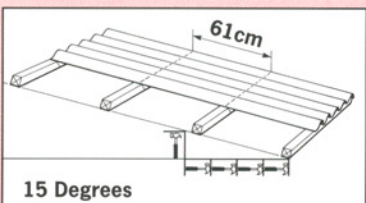
10° to 15°

SUPPORT: Purlins at 45cm centres

END LAP: 20cm

SIDE LAP: 1 corrugation

GRADIENT: 1 in 6 to 1 in 4



ROOF PITCH

15° and over

SUPPORT: Purlins at 61cm centres

END LAP: 17cm

SIDE LAP: 1 corrugation

GRADIENT: 1 in 4 or less

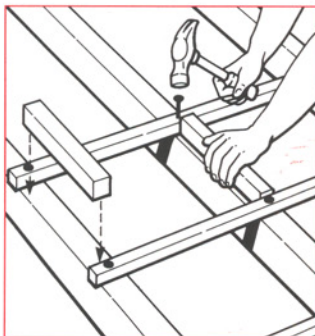
The section of the decking and purlins should be of sufficient size to support the weight of the roof and will be determined by the distance between rafters.

ONDULINE ROOF DESIGN

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 avoided by fixing an Ondutiss underlay membrane below the Onduline sheets. This is particularly important on buildings with high humidity levels. Insulation can also be easily incorporated to create a warm roof construction.

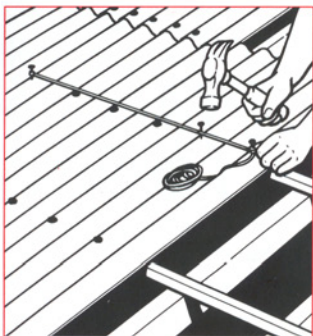
Fixing Guide

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 the back cover.



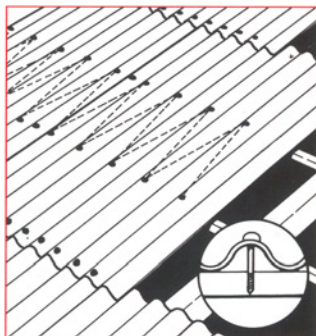
1. SETTING OUT

Purlins must be of sufficient section to give support between the rafters. Set purlin centres as detailed on the left. Use spacers to keep the purlins square.



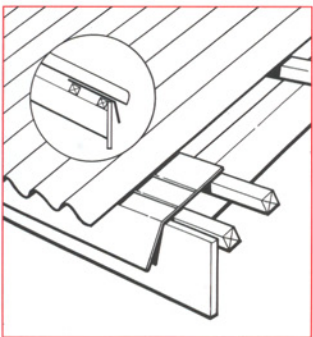
4. NAILING

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 on line.



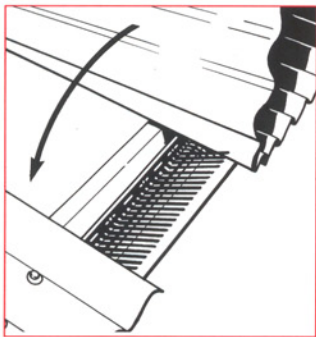
5. NAILING

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



8. 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.



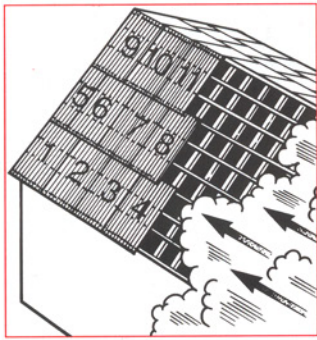
9. EAVES VENTILATOR STRIP

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



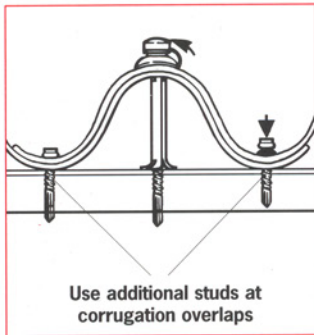
2. CUTTING

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



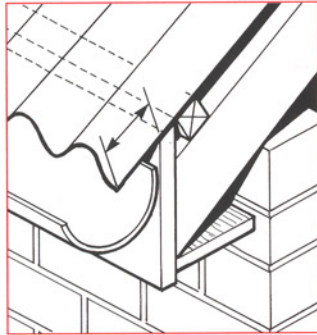
3. SHEET LAYOUT

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



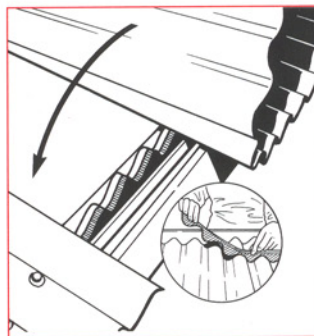
6. STELFIX

Fix Onduline to steel structures using the patented Stelfix drill screw system. Contact the Sales Office for a fixing leaflet.



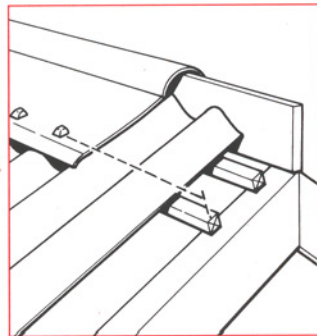
7. EAVES DETAIL

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



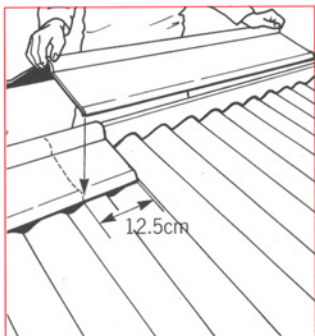
10. CORRUGATION FILLER

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



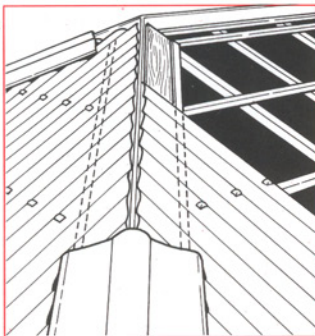
11. RIDGE UNIT FIXING

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



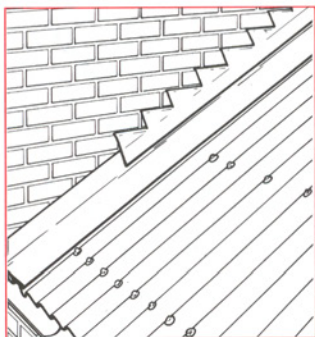
12. RIDGE UNIT FIXING

Start fixing the ridge at the opposite end of the roof from prevailing winds, and form a 12.5cm overlap. Use a string line to align, and nail at every corrugation.



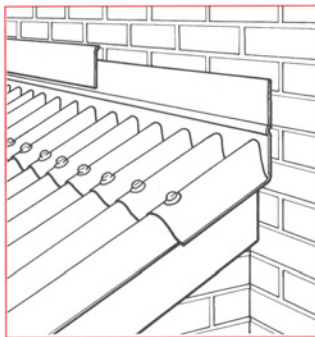
13. HIP DETAIL

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



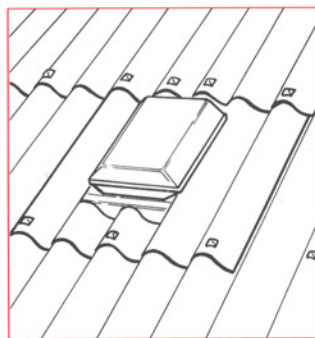
16. SIDE WALL ABUTMENT

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



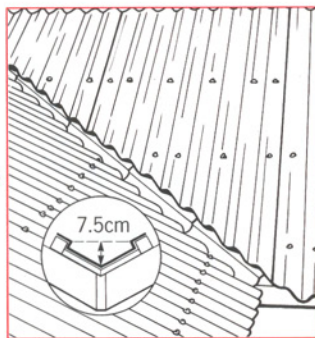
17. ABUTMENT FLASHING

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



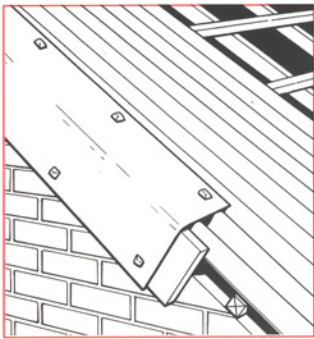
20. ROOF VENTILATOR

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



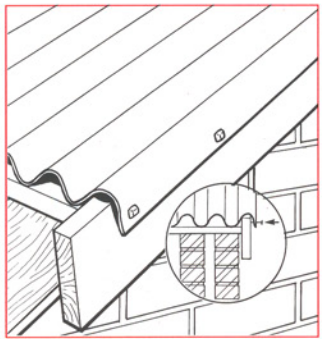
21. ONDULINE VALLEY LINING UNITS

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



14. 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.



15. VERGE FIXING

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



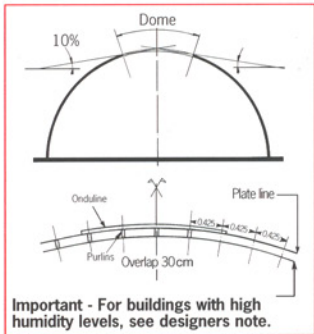
18. ROOF LIGHTS

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



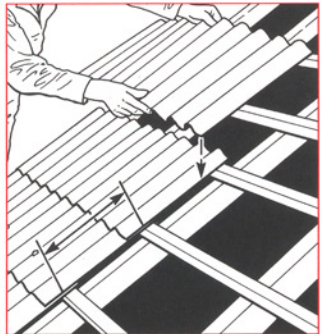
19. ROOF WINDOW

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



22. CURVED ROOF DETAIL

Cover the dome with a full sheet laid with double corrugation side lap and 30cm end lap, supported on purlins at 43.5cm centres. The purlin centres on side walls revert to 61cm.



23. ONDULINE TILE EFFECT

Cutting Onduline sheets into 50cm lengths and fixing with a 20cm overlap easily creates a pleasing tile effect shadow line.

MATERIAL SPECIFICATION (NOMINAL)

Sheet Size:- 2.000 x 0.950m

Weight:- 6.4kg

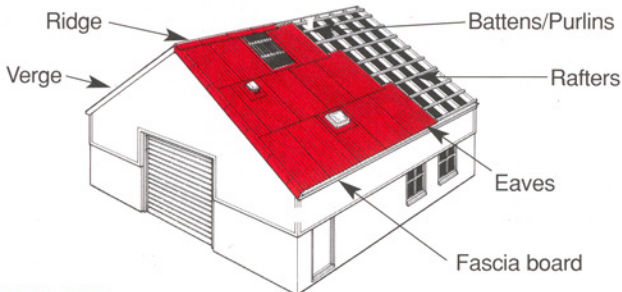
Corrugation size:- 9.5 x 3.8cm

Thickness:- 3mm

Colours:- (PP Prepigmented) Black, Green, Red, Brown.

Note: take care to fix Black Onduline sheets the correct way up. The underside is easily identified by its dappled surface finish.

BUILDING NOTATION



CAUTION

Covering of roofs can be a hazardous operation. All works should be carried out with due regard to health and safety regulations.

MAINTENANCE

To ensure long life the roof should be cleared of leaves and debris and gutters cleaned regularly.

DESIGNERS NOTE

On curved roofs over buildings with high humidity levels, i.e. agricultural animal housing, it is essential that high level ventilation is incorporated, and the dome centre sheet is fully supported. (Details available from the technical department.)

ONDULINE SYSTEMS PRODUCTS & ACCESSORIES

In a leaflet of this size it is not possible to include full details of all our products, but comprehensive literature is available giving full details of the range of Onduline products, and conditions of use. The Technical Sales department will be pleased to supply you with copies, or assist you in specific enquiries.

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