

Onduline

ROOF RENOVATION OVERSHEETING SYSTEM



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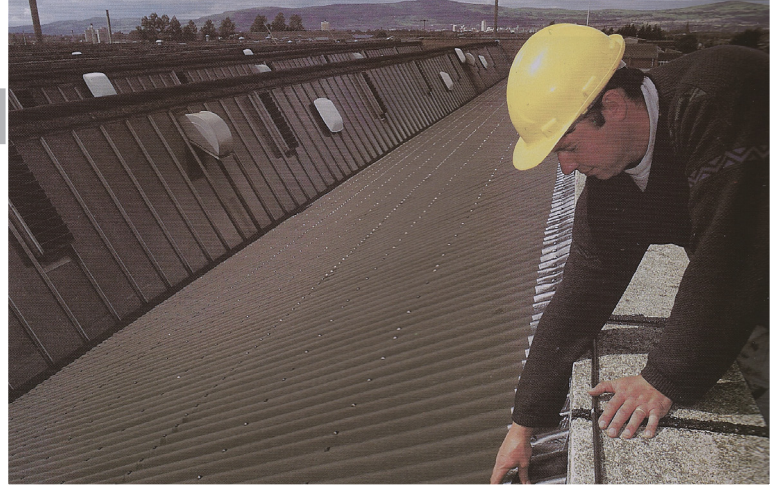
Renovation Oversheating System

The system has been developed using the proven Onduline weathering performance and durability. Its lightweight makes it ideally suited to upgrading a wide variety of applications on industrial, agricultural and general building projects.

Onduline provides an extremely tough, flexible and lightweight roof covering that is resistant to vibration and chemicals, whilst being both easy to handle and fix, even to curved roofs. All this, together with its comparatively low cost, combine to make Onduline the first choice oversheating material.

Roof Preparation

A thorough inspection of the existing roof structure should be undertaken and any deterioration should be rectified and the structure checked as to its suitability for oversheating procedures. A review of the original roof design should also be made to check that sufficient ventilation and insulation is provided and if any necessary alterations are required in the roof refurbishment oversheating system specification in order to upgrade the roof performance.



Renovation System Benefits

- Reduced disruption to the interior use of the building during re-roofing operation.
- Cost saving option compared to re-roofing with a new steel or fibre cement roofs.
- Durable proven low maintenance roof covering.
- Lightweight, making Onduline the ideal material for oversheating most types of existing roof.
- Ease of upgrading existing steel and fibre cement roofs thermal and sound insulation properties.

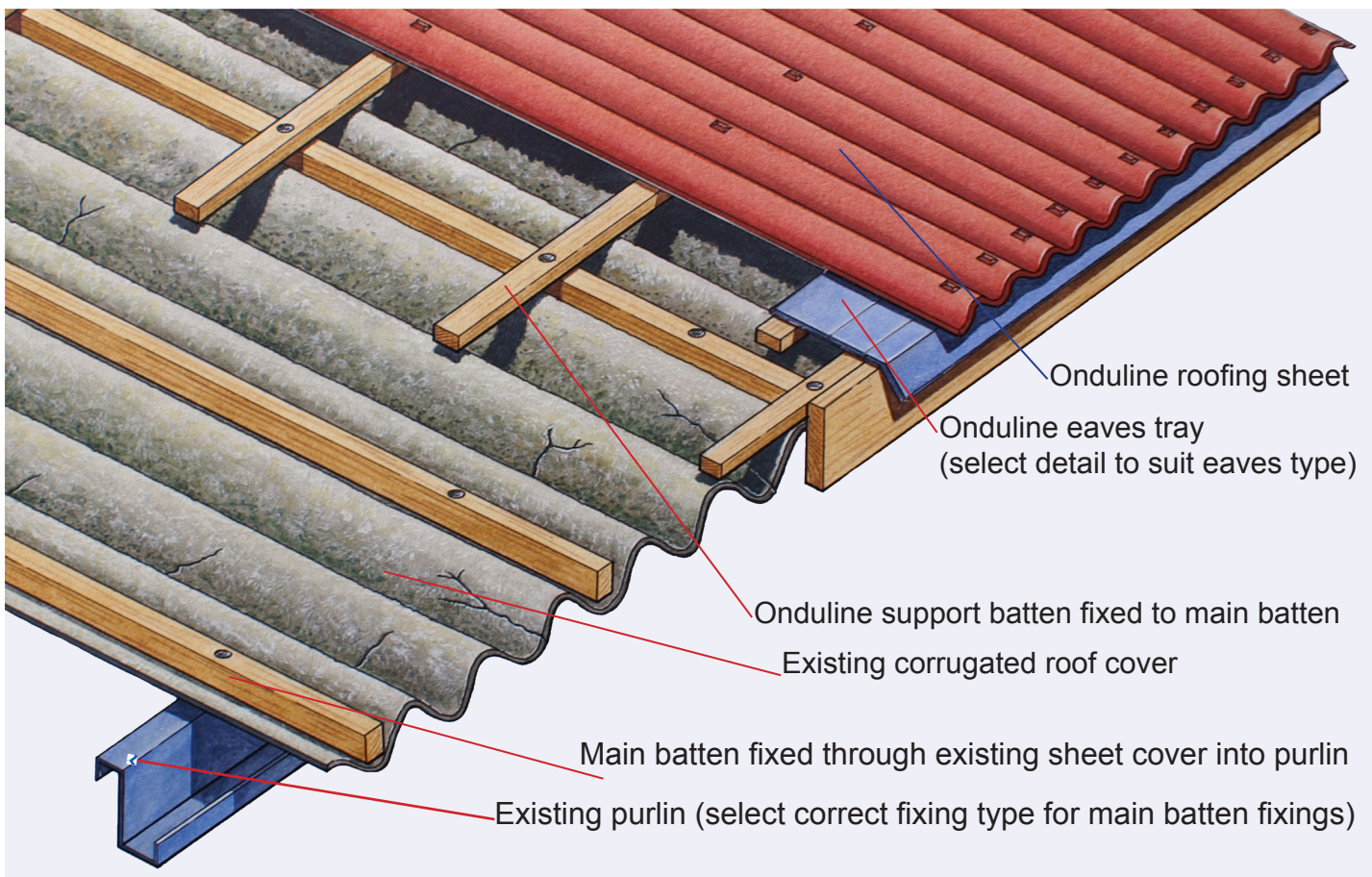
Onduline Classic PPHR sheet colours:

Red, Brown, Green, and Black

Onduline sheets have the colour stained into the sheet using a unique pigmentation process.

Onduline is guaranteed for 15 years*

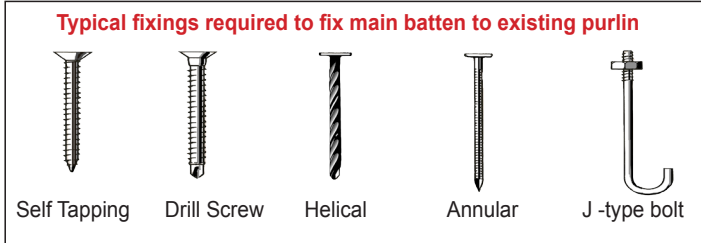
*Terms and conditions apply



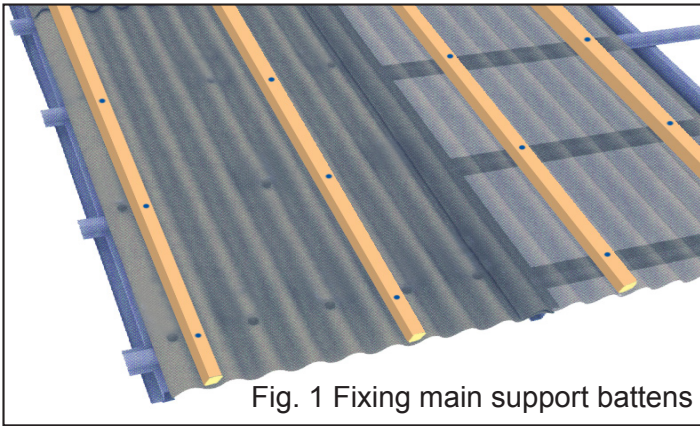
Onduline Fixing Specification

Fixing the main support battens: Fig. 1

Select the correct section of timber for the main support battens to allow for the depth of the existing sheet corrugation, plus an additional allowance for the depth of insulation and ventilation channel if required. Then select the appropriate fixing after consulting a specialist supplier to secure the main support batten into the purlins.

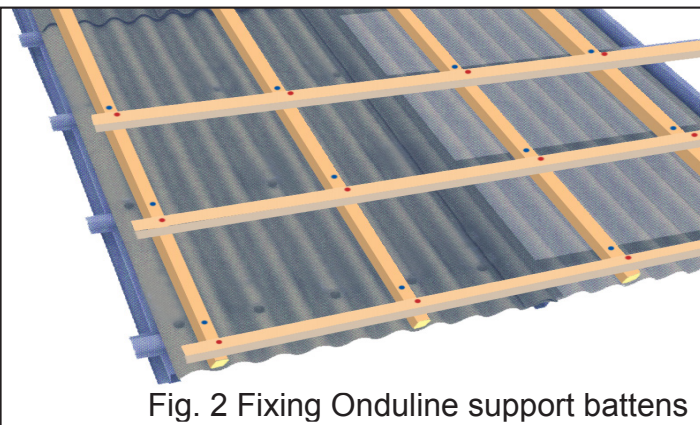


The treated main battens are then laid into the existing roof corrugations at a maximum centre of 600mm fixed at every junction with the purlins below. Note: If fragile roofs such as fibre cement sheets require pre-drilling this should be done through the main batten. The Health and Safety requirements set out in HSG33 roof works must be adhered to.



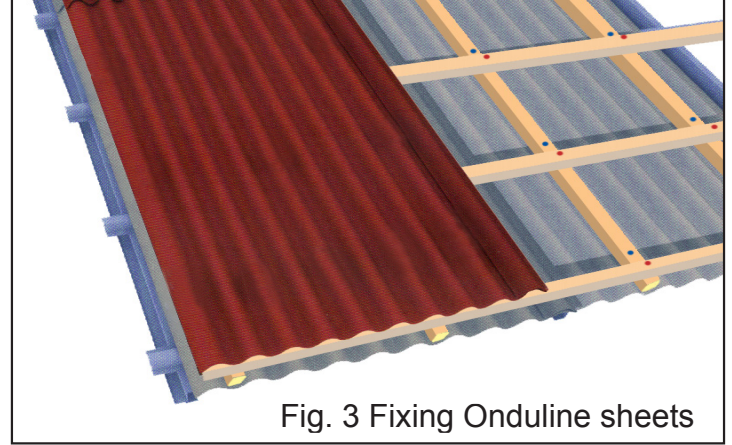
Fixing Onduline battens to the support battens: Fig. 2

The main battens are then overlaid with the Onduline fixing battens, using either treated 25 x 50mm for main battens set at 450mm centres or 50 x 50mm if set at 610mm centres using 65 x 3.35mm annular ring shank nails at every junction.

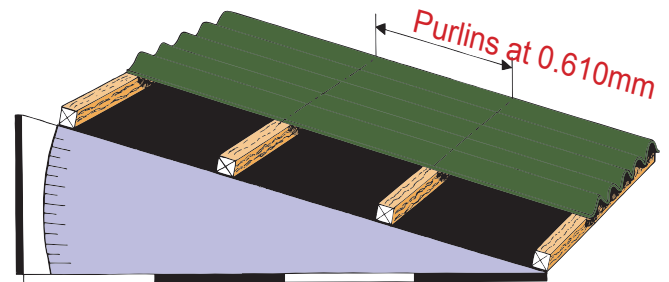


Fixing the Onduline corrugated sheets: Fig. 3

The Onduline sheets are then fixed in strict accordance with the Onduline fixing guide set out in the tables below. Using Onduline PE nails or Onduline Safe Top heavy duty nails. If fixing steel purlins use 65mm drill screws fixed through Safe Top washers using a drill with an adjustable torque setting to avoid compressing the sheet corrugations during fixing.

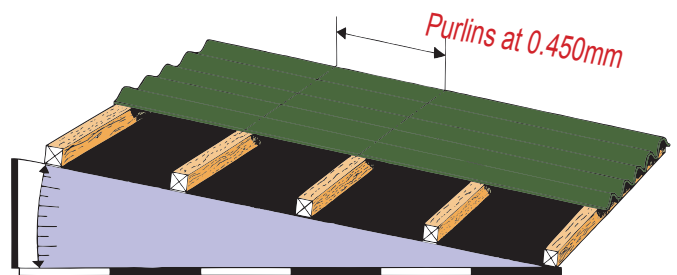


For Roof Pitch: 15° and over



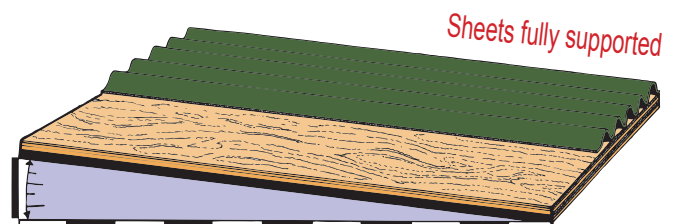
Gradient: 1 in 4 or less	End Lap: 170mm
Support: Purlins fixed at maximum span of 610mm.	Side Lap: 1 Corrugation
	Fixings: 20 per sheet

For Roof Pitch: 10° to 15°



Gradient: 1 in 6 to 1 in 4	End Lap: 200mm
Support: Purlins fixed at maximum span of 450mm.	Side Lap: 1 Corrugation
	Fixings: 25 per sheet

For Roof Pitch: 5° to 10°



Gradient: 1 in 11 to 1 in 6	End Lap: 300mm
Support: Decking laid on purlins with maximum span of 610mm.	Side Lap: 2 Corrugations
	Fixings: 20 per sheet

Roof design notes

The Onduline overshooting renovation design requires consideration be given to the thermal performance of the roof section to counter the effects of both UV radiated heat gain and loss acting through the Onduline sheet into the batten cavity. The presence of warm moisture laden air rising from within the building into the roof space which left unchecked can cause serious condensation related problems. Fig. 4

It is therefore essential that the existing roof is first surveyed to identify its current thermal performance and to then allow the roof section design to be upgraded with enhanced insulation, ventilation and vapour control membranes as required.

Insulated roof construction design notes:

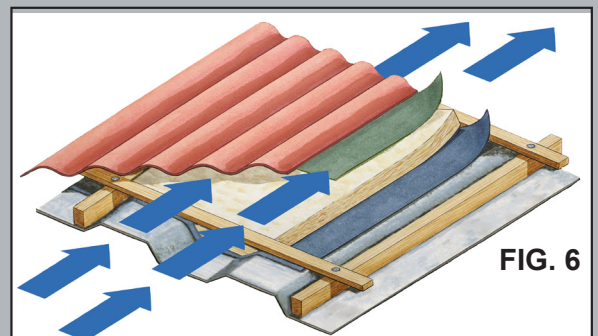
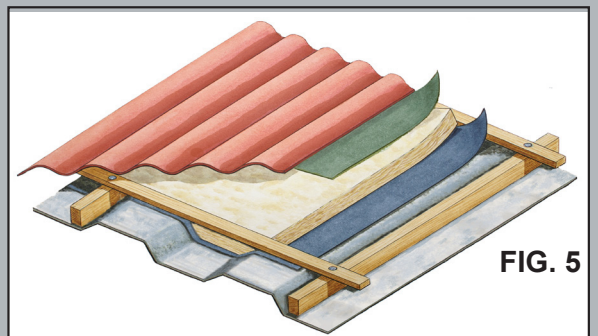
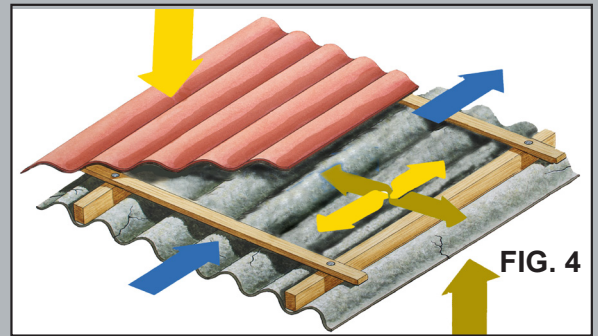
Insulation is normally recommended particularly over steel roofs to avoid the risk of increased heat transference into the building. To minimise the risk of roof void condensation, it is essential that insulation products are laid in accordance with the manufacturers' instructions and independent third party assessments. This should include fitting an effective water vapour barrier beneath the insulation. Some insulation materials require a vapour permeable membrane to be laid over the insulation if necessary. If high levels of moisture is present within the building, mechanical vapour extraction should be provided. Fig. 5

Ventilation roof construction design notes:

Onduline roof renovation forms a cold roof section, the sheet corrugations contribute 17000mm² per linear metre of the total ventilation of 50,000mm² per linear metre required. If decking is used, slots in the decking can be provided at high and low levels to utilise the sheets corrugations channels. On roof spans greater than 12m, additional roof ventilation is advisable mid span provided by fixing Onduline WG33 roof ventilators. Fig. 6



Roof details



Construction notes

Standard eaves fixing FIG. 7

The overhang of the existing sheet is trimmed back in line with the fascia. A new raised fascia is fixed to the height of the top edge of the Onduline support battens. The rainwater goods are re-fitted. The Onduline sheet is then laid with a maximum of 70mm overhang at the eaves. A ventilator strip is fixed to eaves batten.

Flush eaves fixing FIG. 8

The flush eaves detail avoids cutting the existing corrugated sheet or repositioning the rainwater goods. A ventilator strip is fixed to the eaves batten sealing the existing roof corrugations; this is overlaid with an eaves tray, its rear edge supported by a secondary batten. Onduline sheet is laid with a maximum of 25mm overhang from the front edge of the eaves tray.

Eaves spa brackets fixing FIG. 9

An alternative method of avoiding the cutting of the existing corrugated material is to use spa fixing brackets fixed to the main support battens, allowing the rainwater goods to be easily re-positioned. Ventilator combs can be used to seal corrugations.

Verge detail FIG. 10

The verge is formed by using the preformed Onduline verge section or by forming a verge cloaking piece from zinc or similar flashing material.

Ridge detail FIG. 11

In most cases the existing ridge units can be retained. In these situations, the top of the main batten may need to be chamfered to suit the raised ridge line. Onduline preformed ridge pieces can then be fixed utilising an additional support batten as shown.

Steel fixing detail FIG. 12

Steel support structures can be used by either fabricating conventional timber structures as previously described fixed to the existing steel purlin using drill screws. Alternatively, a steel support structure can be fabricated from galvanised steel multi-beams acting as the main support batten to steel 'Z' section purlins. The Onduline sheets are fixed using 65mm drill screws applied through a Safetop washer, using an adjustable torque drill to ensure the sheet corrugations are correctly compressed. Screw every other corrugation at the eaves and on sheet laps and then use three fixings on intermediate corrugations either side of the vertical lap joint and one to the centre of the sheet.

Caution

Covering existing fragile corrugated roofs is a specialist operation. All works should be carried out with due regard to all Health and Safety Regulations; this is of particular importance when dealing with fibre cement materials possibly containing asbestos. Under no circumstances should blue and brown asbestos be oversheeted and on any roof containing asbestos consult your Environmental Health Officer for guidance and follow relevant site handling requirements. It is advisable not to clean corrugated fibre cement sheets. Treat them with a diluted PVA adhesive coating to consolidate the internal and external surfaces prior to fixing. Finally lay Ondutiss roofing membrane onto main support battens to seal roof. Building regulations should be adhered to and in some instances planning approval may be required.

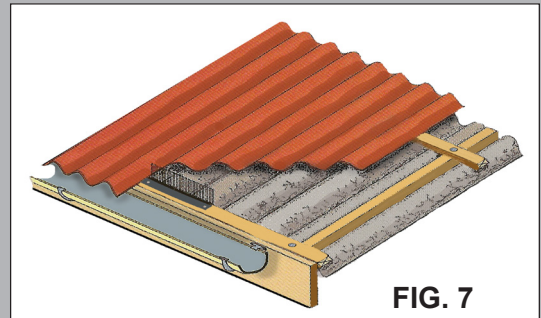


FIG. 7

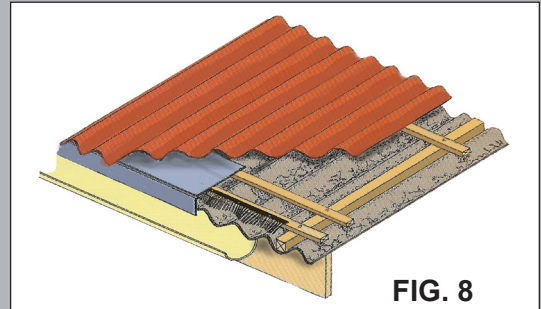


FIG. 8

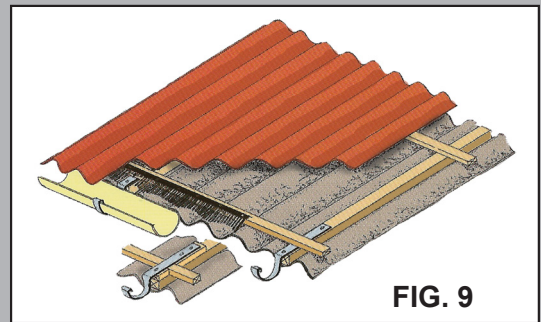


FIG. 9

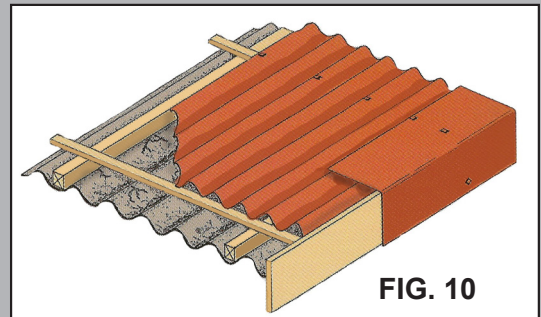


FIG. 10

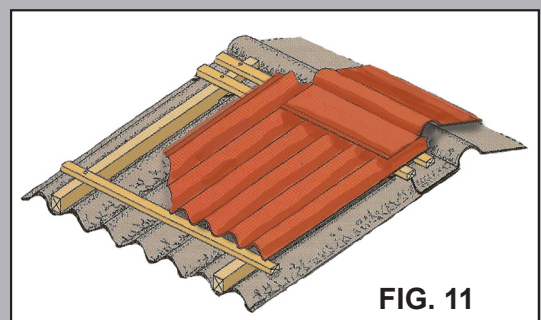


FIG. 11

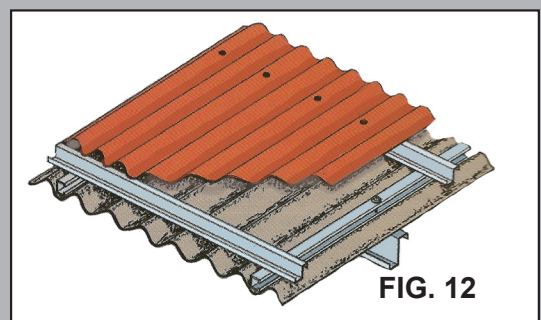


FIG. 12

Supply

The Onduline Roof Renovation System is available from stock through authorised distributors. A complete list can be obtained on application. For bulk delivery please contact Onduline Building Products Ltd sales office direct.

Application

Onduline roofing systems must be laid in strict accordance with the relevant Fixing Guide or Ondutite and Oversheeting literature and maintained as directed.

Guarantee

The Onduline roofing sheets are 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.

Caution

Covering of roofs can be a hazardous operation. All work must be carried out with due regard to health and safety regulations as set out in HSG33 (Roof work).

Conditions Of Use

As a result of product development, specifications and product dimensions may be changed without prior notice. The Onduline Roof Renovation system has been developed in consultation with major insulation manufacturers and their specifications must be followed.

Warning:

Only the quality standard of Onduline PPHR sheet is suitable for use with the Onduline Roof Renovation system. Lighter DIY grades of bituminous sheets are not suitable for use on agricultural and industrial projects.

Note: The new 24mm lowline Onduline sheet is being introduced for use with this system soon.



www.Onduline.net

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DECLARATION OF CONFORMITY
Manufactured in compliance with European Union Directives
Standard EN12566-1:2002 in respect of Roofing Construction
Product Onduline PPHR 24mm and other grades of Onduline PPHR
1800 ZA 14123248 Copyright Onduline Sheet standard



Onduline Literature

Contact our sales office to obtain Onduline literature
Alternatively visit our web site: www.onduline.net and
download a PDF leaflet immediately.

