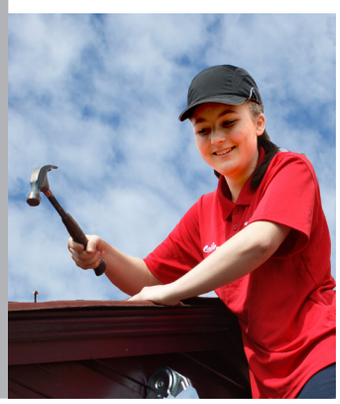
ONDULINE Classic®

The 'high performance' lightweight corrugated bitumen roofing system



Professional grade roofing
Proven durability
Easy to handle and fix

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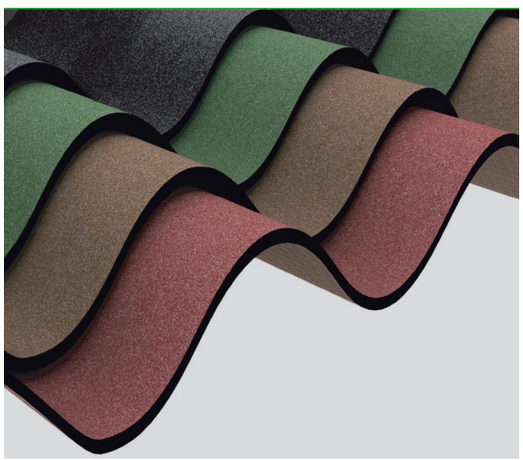
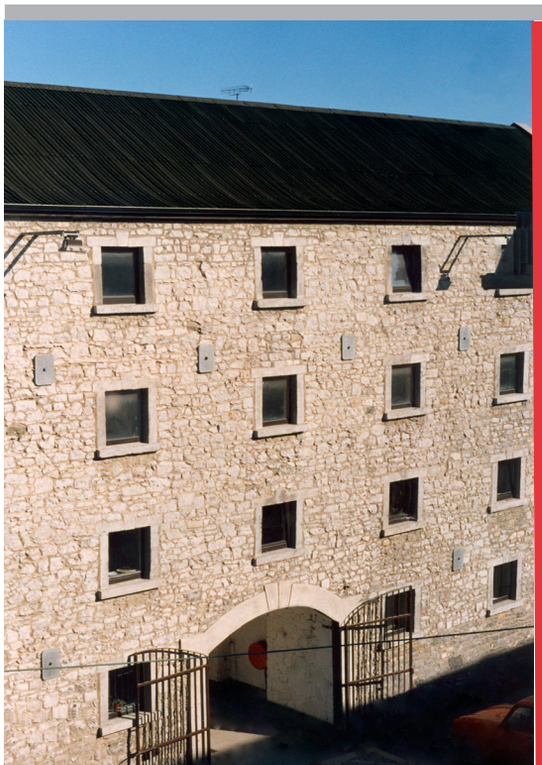
ONDULINE CLASSIC®



The Onduline Group is the worlds largest producer of bituminous corrugated roofing sheets, selling to over 100 countries worldwide.

The Classic Onduline sheet is lightweight but delivers a heavy duty roofing performance, which combined with its low maintenance attributes make Onduline Classic the professional's choice for a wide range of roofing projects, ranging from large industrial and agricultural projects to a simple garden shed.

A tradition of quality



ONDULINE CLASSIC SYSTEM

The class leading Onduline Classic roofing system incorporates a wide range of accessories, matching your specific project requirements.

This combined with its proven durability and weathering characteristics makes Onduline Classic the professional's choice, just carefully follow the fixing instructions to ensure a long lasting roof.

ADVANTAGES

Onduline is an extremely tough, lightweight, corrugated roofing and wallcladding material, manufactured utilising a base board produced from recycled cellulose fibres which is saturated with bitumen under intense pressure and heat.

Onduline sheets are finished with a colour pigment and resin impregnation process which "stains" the colour into the sheet to provide excellent colour retention properties and enhanced U.V. resistance.

VERSATILE ROOF APPLICATION

The Onduline Classic sheet is ideal for a wide range of applications reflecting the materials unrivalled versatility for use on agricultural, industrial, DIY and environmental projects. It is the only bituminous corrugated sheet suitable for use on the market leading Ondutile underlay roofing system.

PROVEN QUALITY AND DURABILITY

Originally developed in Europe over 60 years ago, Onduline is now extensively used worldwide in over 100 countries from the Tropics to the Arctic Circle. This experience and commitment to continuous product development has resulted in Onduline becoming the worlds largest manufacturer of bituminous corrugated sheets and the professionals first choice.

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Onduline Quality Assured Roofing

ONDULINE CLASSIC SHEETS

SYSTEM BENEFITS

- *BBA Product Certification*
- *Easy to handle, cut, shape and fix*
- *15 year weather proofing guarantee**
- *Excellent colour retention properties*
- *Withstands windspeeds of up to 120mph (192kph).*
- *Lightweight, only 6.4 kg per sheet*
- *High thermal and sound insulation*
- *Does not rust, rot or become brittle*
- *Flexible, ideal for renovation projects*
- *ISO 9001:2008 Quality Management Standard*
- *ISO 14001: 2004 Environmental Management*

DIMENSIONS: (nominal)
length: 2,000mm **width:** 950mm
cover width: 855mm **thickness:** 3mm
coverage of sheet: 1.53m^2
number of corrugations: 10
corrugation width: 95mm
corrugation height : 38mm
weight of material: 3.3kg/m^2
weight per sheet: 6.4kg
thermal resistance R value: 0.04mK/W
thermal conductivity: 0.066W/mk

**Guarantee terms and conditions apply*

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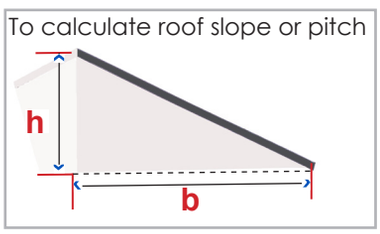
ONDULINE CLASSIC FIXING GUIDE - ROOF DESIGN

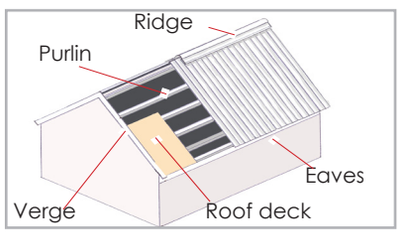
The Onduline Classic sheets are easy to handle and fix, just follow these simple steps to design and construct a durable and long lasting roof.

1 **First determine the slope or pitch of the roof to be covered?** To do this measure the angle or slope of your roof using a protractor or alternatively, calculate the roof slope gradient by first measuring the distance from the roof centre line to the eaves b and dividing it by the height of the roof at the ridge h as illustrated below. (Example: b 6.000 m ÷ h 1.500 m = 4, meaning a roof gradient of 1 in 4 or 15^0 degrees).

2 **Next work out what roof support structure is required to support the Classic sheets:** Select the appropriate roof support structure dependant on your roofs slope from the table below. So it will be either purlins set at 610mm or at 450mm centres or for low pitches on a fully supporting decked roof.

3 **Finally to fix the sheets simply note the appropriate fixing specification:** Determine the correct sheet end and corrugation side laps, then position the sheets and nail at every corrugation at the eaves, ridge and every other corrugation on the intermediate purlins. Also nail either side of vertical corrugation laps.





Roofing terminology:

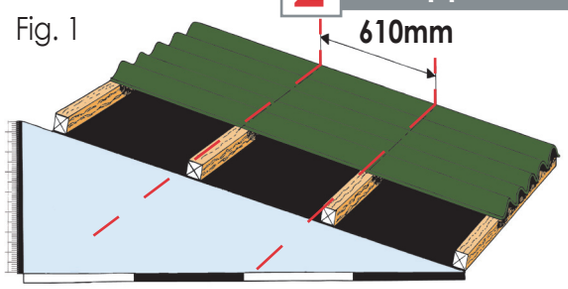
Ridge: Highest point of the roof.
Purlin: Batten used to support sheets.
Roof deck: Fully supporting board.
Verge: Edge of roof up roof slope.
Eaves: Lowest point of the roof forming the drip edge into gutter.

SLOPE 15^0 +

1 **Select roof slope:** 15^0 degrees and over (Gradient: 1 in 4 or higher)

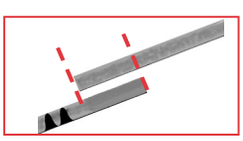
2 **To support sheet:** Fix to Purlins at 610mm (24") centres (max).

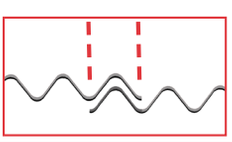
Fig. 1



3 **To fix sheet:**

Sheet end lap:	*Sheet side lap:*	*Nails per sheet:*
170mm	**1 Corrugation**	**20**



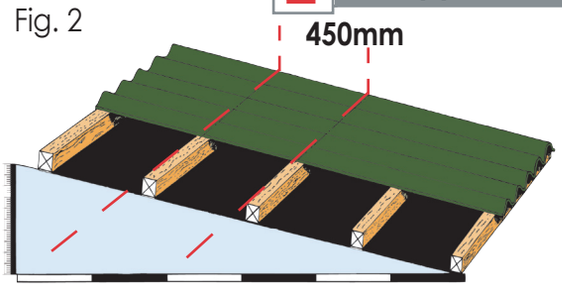


SLOPE 15^0 -10^0

1 **Select roof slope:** 10^0 to15^0 to degrees (Gradient: 1 in 4 to 1 in 6)

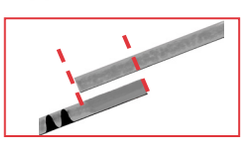
2 **To support sheet:** Fix to Purlins at 450mm (18")centres (max).

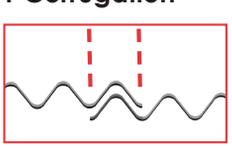
Fig. 2



3 **To fix sheet:**

Sheet end lap:	*Sheet side lap:*	*Nails per sheet:*
200mm	**1 Corrugation**	**25**



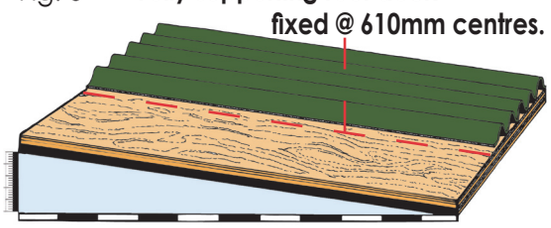


SLOPE 10^0 - 5^0

1 **Select roof slope:** 5^0 to 10^0 degrees (Gradient: 1 in 6 to 1 in 10)

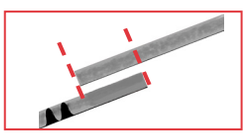
2 **To support sheet:** Fix on decked or close boarding roof.

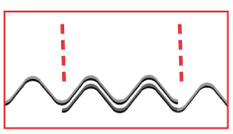
Fig. 3 **Fully supporting roof deck fixed @ 610mm centres.**



3 **To fix sheet:**

Sheet end lap:	*Sheet side lap:*	*Nails per sheet:*
300mm	**2 Corrugation**	**20**





Note: At the eaves allow a 50mm to 70mm sheet overhang. * On decked roofs position nail fixing lines at 610mm centres

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ONDULINE CLASSIC FIXING GUIDE - DESIGN NOTES

Timber Purlin roof design

Timber purlins should be of sufficient section to support the roof loadings. The design schedule set out in the table below gives suggested minimum timber sections for roof pitches over 15^0 including allowances for normal snow loadings. Note: On exposed sites it is recommended that a fully supporting roof deck is first laid over the purlins.

Span (m)	Typical timber section sizes for treated softwood purlins (on roof pitches above 15^0) (mm)
0.450	38 x 25
0.610	50 x 50
2.4	38 x 75
3.0	38 x 100
3.6	38 x 125
4.2	44 x 150
4.5	50 x 150
4.8	50 x 160
5.4	63 x 175
6.0	63 x 200
6.6	75 x 200

Note: This table is prepared as a guide only in consultation with TRADA the British Timber Research and Development Association. However, design needs can vary according to roof layout and building regulations. Professional advice should always be sought for specific roof design applications.

Maintenance To ensure a long life the roof should be cleared of leaves and debris and gutters cleaned regularly. Any branches in contact with the roof surface should be removed.

Technical Note

Onduline sheets are not classified to External S.AA fire rating as required in UK Building Regulations for some classes of structure. In these cases they must be fixed on a fully supporting roof deck and the sheets coated with a proprietary AA surface paint treatment applied in accordance with the paint manufacturers instructions.

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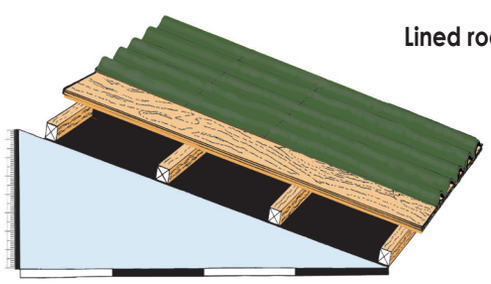
CONDENSATION

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. Similarly moisture within the building during periods of sub zero temperatures can freeze to the underside of the sheet, which melts as the roof warms in the morning. The installation of high and low level ventilation will reduce this risk. A range of Onduline ventilation accessories will help in this provision.
The threat of condensation can be significantly reduced by first fixing Ondutiss underlay membrane over the support purlins. Ondutiss should always be used on buildings with high interior humidity levels.

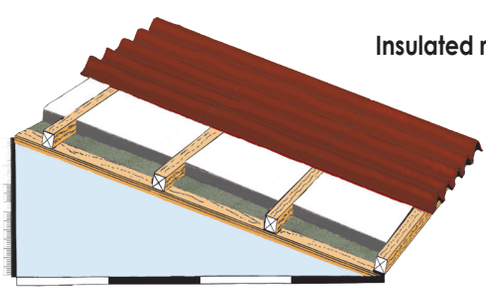
ONDULINE ROOF UPGRADES -

Lined roof section.



A lined roof section can be easily constructed by overlaying the purlins with a 12mm roof grade board and Ondutiss membrane prior to fixing Onduline sheets. Fix the sheets by nailing through the deck into the purlins.

Insulated roof section.



A basic warm roof can be simply formed by fixing purlins onto a roof deck, then lay rigid insulation boards between the purlins, a membrane should be provided to act as a vapour barrier below the deck boards.

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Onduline Quality Roofing Systems

The light weight Onduline Classic sheet, with it's proven high performance durability forms the perfect basis for a range of professional roofing systems.

ONDUTILE SYSTEM

The Ondutile roof tile and slate underlay system: Permits tiles to be laid below the manufacturers minimum roof pitches, allowing them to be used on height restricted projects.

OVERSHEETING SYSTEM

Onduline Classic over sheeting roof renovation system: Allows deteriorated profiled steel and fibre cement roof coverings to be overlaid with a new roof covering and the roof insulation provision to be upgraded

Ondutile tile underlay system

Onduline Classic sheets are used as the base for the Ondutile system, which provides a secondary weatherproof roof below primary tile and slate roofs. This allows tiles to be used safely below the tile manufacturers minimum recommended roof pitch when the available roof pitch is restricted. The Ondutile system also enhances ventilation, sound and thermal insulation provision to the roof.

Minimum recommended roof pitches:

Interlocking concrete tiles:	**12.5°**
Pantiles, natural and fibre cement slates:	**17.5°**
Plain double lap tiles:	**22.5°**

Note: The Ondutile system also uses the Onduline Mini 18 sheet as part of the Ondutile low line system.

Oversheeting roof renovation system

Onduline Classic sheets being light and flexible are the ideal material for oversheeting existing deteriorated profiled steel and fibre cement profile roofs.

This is often the most economic, practical and safe solution to the problem of renovating deteriorating profiled roofs, it can significantly reduce to a minimum the disruption to a buildings function during renovation.

The overlaying of profiled sheets allows the provision of the environmental performance of the building to be upgraded to conform to the latest energy conservation requirements.

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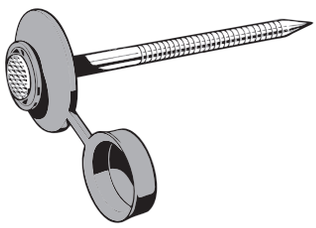
ONDULINE SYSTEM ACCESSORIES



Safe Top Nails

The safe top bonded washer is resistant to UV radiation and with its weatherproof seal provides a superior resistance to wind uplift.
Available in black, red, green and brown.
The washer can also be used with roofing screws when required to fix to thin decking materials.

Material Specification:

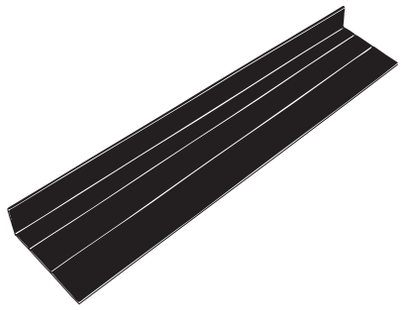
Length: 75mm (overall) **Diameter:** 3.35mm
Packing: Packs of 100.

Plastic Headed Nails

Specially designed UV resistant plastic headed nails with zinc plated corrosion resistant shanks.
Available in black, red, green and brown.

Material Specification:

Length: 65mm **Diameter:** 3.1mm
Packing: Packs of 400.

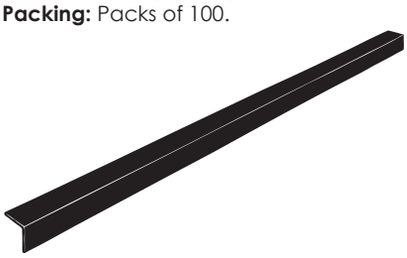


Multi-Purpose Eaves Tray

Manufactured in a UPVC sheet with pre-formed drip edge into the gutter. It is used for Onduline, Ondutile and Oversheeting roofing systems.

Material Specification:

Length: 1.500m **Coverage:** 1.300m
Lap: 200mm **Width:** 254mm

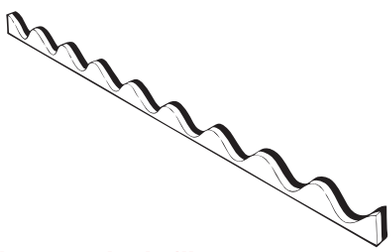


Batten Cloaking Piece

Designed for the Ondutile system and used in conjunction with the Eaves Ventilator Strip, it protects the eaves batten from possible water ingress whilst also providing an aesthetically pleasing finish to the eaves detail.

Material Specification:

Length: 1.22m (1.12m cover width)
Width: 55mm x 55mm for 25mm battens

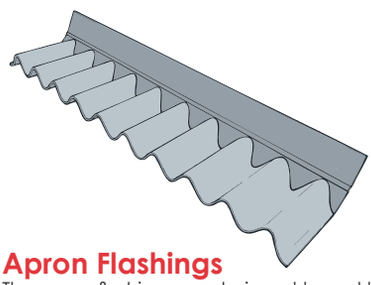


Corrugated Fillers

Designed to match the Onduline profile, these polyethylene units seal the corrugations at eaves and ridge, preventing the ingress of water, dust and draughts.

Material Specification:

Length: 855mm (cover width of sheet) Onduline Profile 95 x 38mm
Packing: 100 per box

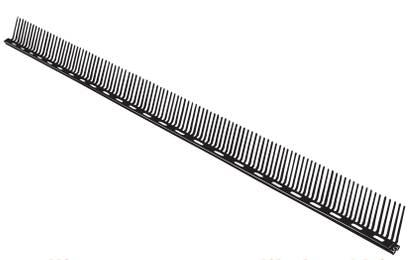


Apron Flashings

The apron flashings are designed to seal the gap between Onduline sheets and vertical wall abutments. Suitable for any pitch of roof.
Note: Also available in Onduline Mini 18 profile.

Material Specification:

Length: 930mm nominal length (835 cover width) Onduline Profile



Multi-Purpose Ventilator Strip

The Ventilator Strips are used to allow ventilation into the roof space whilst preventing the infiltration of birds and large insects into the eaves. They are secured by nailing with galvanised round headed nails.

Material Specification:

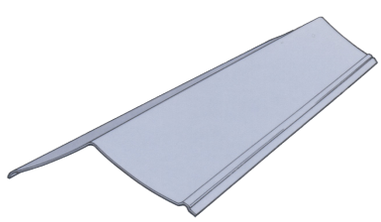
Length: 1000mm

Ridges Units

Manufactured from the same material and to the same high specification as Onduline sheets. Flexible double wings accommodate a wide range of roof angles. Available in the four Onduline colours - black, red, green and brown.

Material Specification:

Length: 1000mm Cover length: 780mm / 860mm Width (flat)**:** 485mm

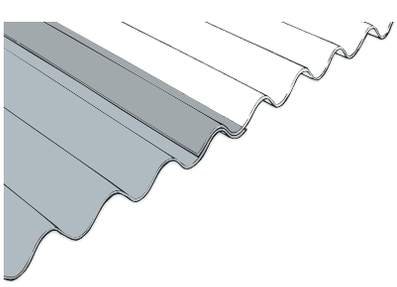


Verge Units

Manufactured from the same material and to the same high specification as Onduline sheets. Flexible double wings accommodate a wide range of roof angles. Available in the four Onduline colours - black, red, green and brown.

Material Specification:

Length: 1100mm - Cover length: 975mm
Width: (flat) **:** 410mm

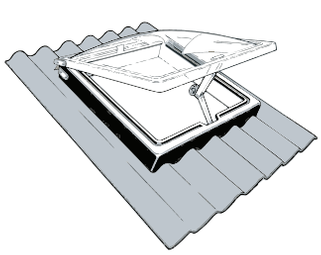


PVC Onduline Profile Sheets

Available in two forms - "glass clear" transparent to provide optimum clarity and light transmission and translucent for use where disfused lighting is required. Manufactured to the same size and profile as Onduline corrugated sheets, they provide a simple, economical way of gaining light through the roof.

Material Specification:

Length: 2000mm **Width:** 950mm

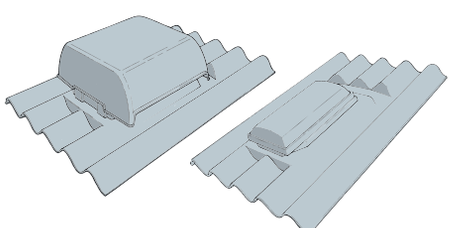


Roof Light Window

The Onduline skylight/roof window provides light and air to the roof and also serves as an exit to roof areas. Modern design prevents infiltration of snow and rain. Quick and easy to install.

Material Specification:

Base length: 890mm **Base Width:** 660mm
Height: 150mm **Thickness:** 3mm
Light Area: 360 x 420mm



Roof Ventilators

A range of easy-to-fix roof ventilators designed specifically for use with Onduline sheets to provide an aesthetically pleasing appearance. They have low air resistance while preventing access by driving rain and snow.

Material Specification:

Free Air Space (WG33): 33,000mm^2
Free Air Space (G3): 10,000mm^2

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Onduline Quality Roofing Range

ONDUVILLA TILES

The Onduvilla tile strips are produced with a unique three tone colour finish, this recreates the warm natural colours that are normally only associated with expensive and heavy clay roof finishes. The Onduvilla tile system also features an attractive 'bold roll' tile profile creating an appealing roof covering finish to your garden buildings. Onduvilla is produced in an easy to handle and fix tile strip format, it makes the ideal DIY choice for a wide range of timber frame buildings.

ONDULINE MINI 18 SHEETS

Onduline Mini 18 sheets are designed to enhance the style of garden timber frame buildings. The low profile compliments perfectly the scale of all sheds, summer houses, childrens play houses,workshops and garages as well as a range of exciting new applications. Mini 18 sheets are light in weight and share the same outstanding weathering performance as the Classic Onduline corrugated roofing sheets, making it the ideal 'Do it Once' upgrade improving both the appearance and service life of your traditional felted sheds.

ONDULINE PLASTICS

The Onduclair® range of PVC, Polycarbonate and GRP quality roofing sheets provide a durable and stylish solution to your roof illumination requirements.

GENERAL INFORMATION

Conditions Of Use

Although the colouring process in the manufacture of the Onduline Classic sheet is long lasting, as with similar natural roofing materials it is subject to the effects of weathering over its service life. The colour can also differ between production batches.

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Specialists in Lightweight Roofing

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