

# *Euronit*

## **Profile 6**

Your fixing guide



0158 149119 | 1

September 2016

**etex** inspiring ways  
of living

## Why choose Euronit Profile 6 sheeting?

- ✓ Warm in winter, cool in summer
- ✓ No condensation
- ✓ Maintenance free and corrosion resistant
- ✓ Absorbs rain noise — increased animal comfort
- ✓ Complete technical support
- ✓ 30-year structural guarantee
- ✓ Grant approved
- ✓ CE mark approved
- ✓ Available in three colours; natural, blue-black and green
- ✓ Crown fixed — low risk of leakage

## Contents

Introduction .....	3
Profile 6.....	4
Technical data .....	5
Windloadings.....	6
Lap treatments.....	7
Installation .....	8
Accessories .....	10
Easy fixing guide .....	16
Mitring guide .....	17
Translucent Sheets.....	18
Spaced Sheeting .....	20
Storage & Handling.....	22
Safety at Work .....	3, 4, 22

## Euronit Profile 6

Etex Ireland, formerly Tegral Building Products, is Ireland's leading manufacturer of fibre cement products. We've offered profile sheeting for over 80 years. Euronit Profile 6 is simply the best quality fibre cement sheeting in Ireland. Suitable for a wide range of uses, including beef and dairy farm buildings, piggeries, sheep and poultry housing, agricultural storage — and in equestrian buildings, where the low rain drumming is a particular advantage.

Profile 6 is equally suitable for residential, recreational, commercial, storage and industrial buildings, where Euronit profiled sheeting has a long and proud tradition of use in all parts of Ireland. Profile 6 is manufactured from Portland cement and water. This is reinforced with a mixture of both natural and synthetic fibres, giving the product its generic description of fibre cement. This process has been perfected over decades — notably in the manufacture of our Cedral Thrutone Endurance Slates — leaders throughout Ireland in the residential, public and commercial roofing markets.

The longevity of fibre cement, with an anticipated service life in excess of 60 years, allows Euronit to offer you a 30 year guarantee on our sheets and fittings. Euronit Profile 6 sheeting is manufactured to Class C1X of the harmonized European Standard EN494: 2012 in accordance with a quality system registered under BS EN ISO 9002.

## Health & Safety

We've always worked to improve safety when using our range of roofing and cladding products. Profile 6 is built on over 80 years experience in the Irish roofing industry. This purpose-designed, polypropylene-reinforced fibre cement sheet meets the most stringent requirements for safety in roofwork, including non-fragile roof assemblies. Using Euronit Profile 6 fibre cement sheeting can help specifiers, installers and owners meet their obligations under health and safety legislation by following the guidance set out in the following documents:

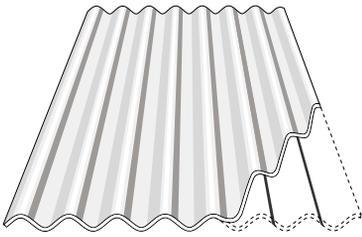
**Republic of Ireland:** 'Code of Practise for Safety in Roof Work' 2016, published by the Health and Safety Authority.

**Northern Ireland:** 'Health and Safety in Roof Work' (HSG 33), published by the Health and Safety Executive, and the Work at Heights Regulations (Northern Ireland) 2005.

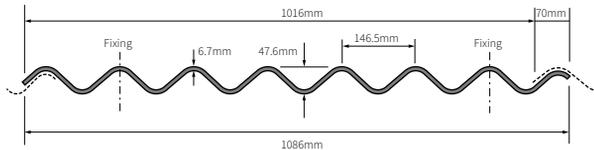
## Profile 6 and safety in roof work

When correctly installed with side and end laps, Euronit Profile 6 has been tested and classified as a non-fragile roof assembly in accordance with the latest national guidance provided by the Irish Health and Safety Authority and the Health and Safety Executive for Northern Ireland.

Profile 6 is a high strength fibre cement sheet with polypropylene reinforcement strips inserted along precisely engineered locations which run for the full length of the sheet in each corrugation. This provides maximum reinforcement strength with no loss of durability in service.



The cut-away illustration above shows the location of the polypropylene reinforcement strip inserted in a precisely engineered position in each corrugation of the Profile 6 sheet.



### Profile 6 sheet dimensions

**Profile 6 sheet lengths (mm)** 1525, 1825\*, 2125\*, 2425\*, 2600, 2750, 2900 and 3050

\*Special Order

### Associated Products

In order to ensure compliance with the latest safety requirements, rooflights must also be upgraded - see pages 18 and 19.

#### Technical data:

#### Standard roofing

#### Spaced sheeting

Technical data:	Standard roofing	Spaced sheeting
Overall width	1086mm	1016mm
Net covering width	1016mm	1016mm
Thickness (nominal)	6.7mm	6.7mm
Density (nominal)	1450kg/m <sup>3</sup>	1450kg/m <sup>3</sup>
Pitch of corrugations (nominal)	146.5mm	146.5mm
Depth of profile	47.6mm	47.6mm
Profile height category	C	C
Side lap	70mm	N/A
Minimum end lap	150mm	150mm
Maximum purlin centres	1375mm	1375mm
Maximum rail centres	1825mm	1825mm
Maximum unsupported overhang	350mm	350mm
Approx. weight of roof as laid, with end laps, single skin including fixings	17kg/m <sup>2</sup>	16kg/m <sup>2</sup>
Minimum roof pitch	10°	12°

**Note:** The minimum pitch for Profile 6 is generally 10°. For pitches lower than this, contact Technical Support. Where slopes are between 5° and 10° the maximum slope length should be 15m with double-sealed end laps and single-sealed side laps.

## Design and Installation Guidance

In addition to this Euronit profiled sheeting fixing guide, reference should also be made to the following standards: BS 8219: Installation of Sheet Roof and Wall Coverings – Profiled Fibre Cement – Code of Practice. BS 5427: Code of Practice for the Use of Profiled Sheet for Roof and Wall Cladding on Buildings. BS 5502: Buildings and Structures for Agriculture, Parts 20, 21 and 22.

The recommendations provided in this technical guide are intended to cover adequately the issues that arise in constructing simple, everyday buildings, primarily for agricultural use.

## Windloadings

When using profiled sheeting the windloadings and the driving rain of a location are critical to ensure the optimal sealing requirements.



**Note:** When buildings stand above their surroundings or are situated in open country with no windbreaks within 5km of the sea, they should be considered subject to severe exposure conditions. Source: SR82.

## Lap Treatments

### Design guidance: simplified procedure

#### Step 1 Exposure

Determine the expected degree of exposure by examining the adjacent map.

## Lap Treatments (continued)

#### Step 2 Centres of support

Support centres for Profile 6 roof sheeting should be a maximum of 1375mm for a superimposed load of up to 1.89 kN/m<sup>2</sup>. There should be two fixings per sheet, per purlin. Where windloadings exceed this level, please contact Euronit Technical Support for advice relating to reduced purlin spacings before proceeding.

#### Step 3 Lap and seal

Establish requirement for lapping and sealing by reference to the exposure zones map of Ireland and the table below. See page 9 for sealing details.

### Moderate exposure sites

Less than 56.5 l/m<sup>2</sup> wind driven rain per spell

Minimum	End lap	Lap treatment	
<b>Roof pitch</b>	mm	End laps	Side laps
22.5° and over	150	Unsealed	Unsealed
15° and over	300	Unsealed	Unsealed
15° and over	150	Sealed	Unsealed
10° and over	150	Sealed	Sealed

### Severe exposure sites

More than 56.5 l/m<sup>2</sup> wind driven rain per spell

Minimum	End lap	Lap treatment	
<b>Roof pitch</b>	mm	End laps	Side laps
25° and over	150	Unsealed	Unsealed
17.5° and over	150	Sealed	Unsealed
15° and over	150	Sealed	Sealed
10° and over	300	Sealed	Sealed

**Note:** On roofs over 10° pitch where parapets might allow snow build up, 300mm double sealed end laps and single seal side laps are recommended. Depending on exposure and roof size contact Euronit Technical Support for advice.

**Lap:** This describes how much one sheet overlaps another at either the end (end lap) or the side (side lap).

**Pitch:** This describes the degree to which the roof slopes.

## Installation

Euronit profiled sheeting is easy to install, but you should always follow these guidelines:

1. The sheets should be installed smooth surface up.
2. The sheets should be cut with a hand saw or slow speed reciprocating power saw.
3. All fixing holes should be drilled, not punched, and should provide adequate clearance for the fastener shank (minimum 2mm).
4. There should be two fixings per purlin or rail covered at the fixing points shown on page 4.
5. When using power tools in a confined area, dust extraction equipment is advisable.
6. The dust and swarf generated when working with the sheets does not require any special handling requirements other than normal good housekeeping to maintain a clean working area.

## Fixing

The correct fixing of a sheet is important in order to avoid premature failure, corrosion or leaks in a roof. Many factors influence the fixing of a roof, such as the purlin or rail type and the nature of the roof in question. Particularly important is the type of fastening system used and compliance with the manufacturer's recommendations. When fixing Euronit Profile 6 fibre cement profiled sheeting on roof slopes up to 30° we recommend the use of appropriate topfix fasteners. These fasteners provide a quick and effective one step fixing operation. However, they must be installed using the recommended depth locating powertool to prevent under or over tightening, which can damage the roof sheets.

When topfix fasteners are not used, the recommended fastener diameter is 8mm, which requires a clearance hole of  $8\text{mm} + 2\text{mm} = 10\text{mm}$ . If using drive screws, the holes should be located centrally on the timber purlins; for hook bolts or similar the hole should be located 4mm upslope from the back edge of the purlin.

**Note** In all instances the Sela washers and protective caps should be utilised to ensure adequate weather protection.

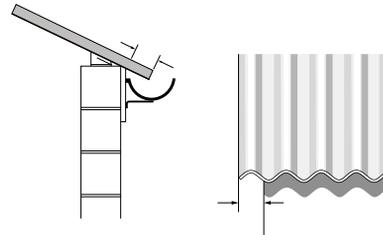
### Checking the topfix fasteners for tightness



## Overhangs

Sufficient overhangs must be allowed at the eaves to ensure that rainwater discharges into the gutter. Generally, the overhang is to the centre of the gutter up to a maximum of 350mm.

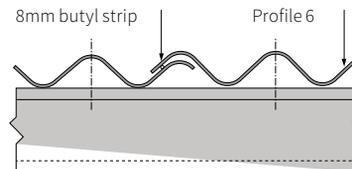
Verges must be overhung by one complete corrugation unless a bargeboard is used.



## Side Laps

### Sealing

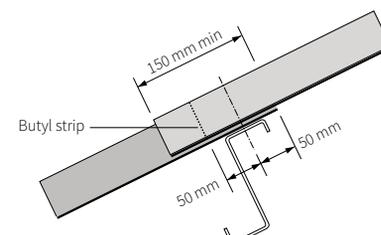
Where appropriate, 8mm diameter butyl strips should be positioned as shown.



## End Laps

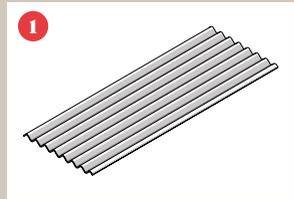
The minimum end lap for Profile 6 is 150mm, fixed as shown in the section below. Where single sealing is necessary, the butyl strip should be positioned 50mm below the fixing.

Where double sealing is necessary, the second butyl strip should be positioned 100 – 200mm below the fixing. When placing the butyl strip in position, allow it to gently fall into the corrugations. Do not pull the strip taut or stretch it as it will lose its shape and effectiveness.

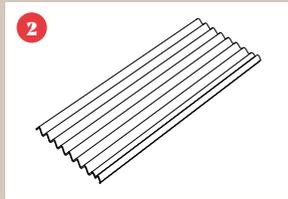


**Note:** See page 7 for lap and seal requirements

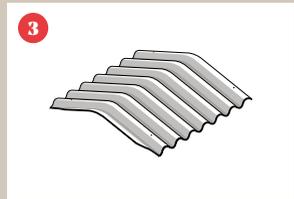
## Accessories in use



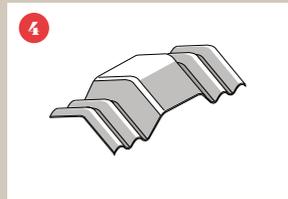
Profile 6



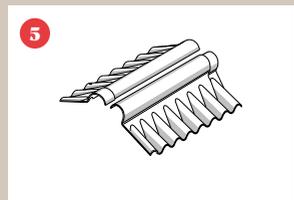
Polycarbonate translucent sheet



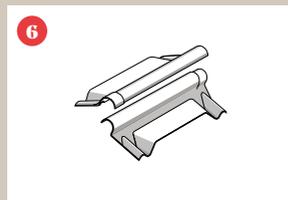
Cranked crown sheet, for covering apex of roof



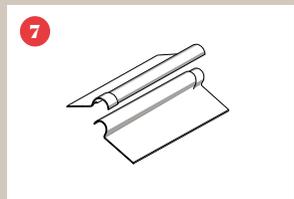
Ventilating cranked crown, for ventilation at apex of roof



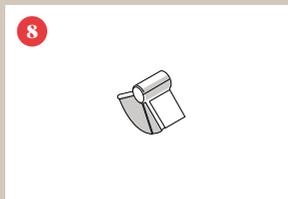
Two-piece close fitting ridge cover, with profile wings adjustable over range of roof pitches



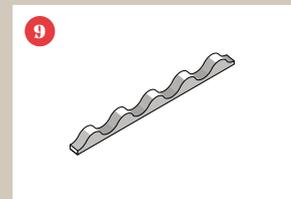
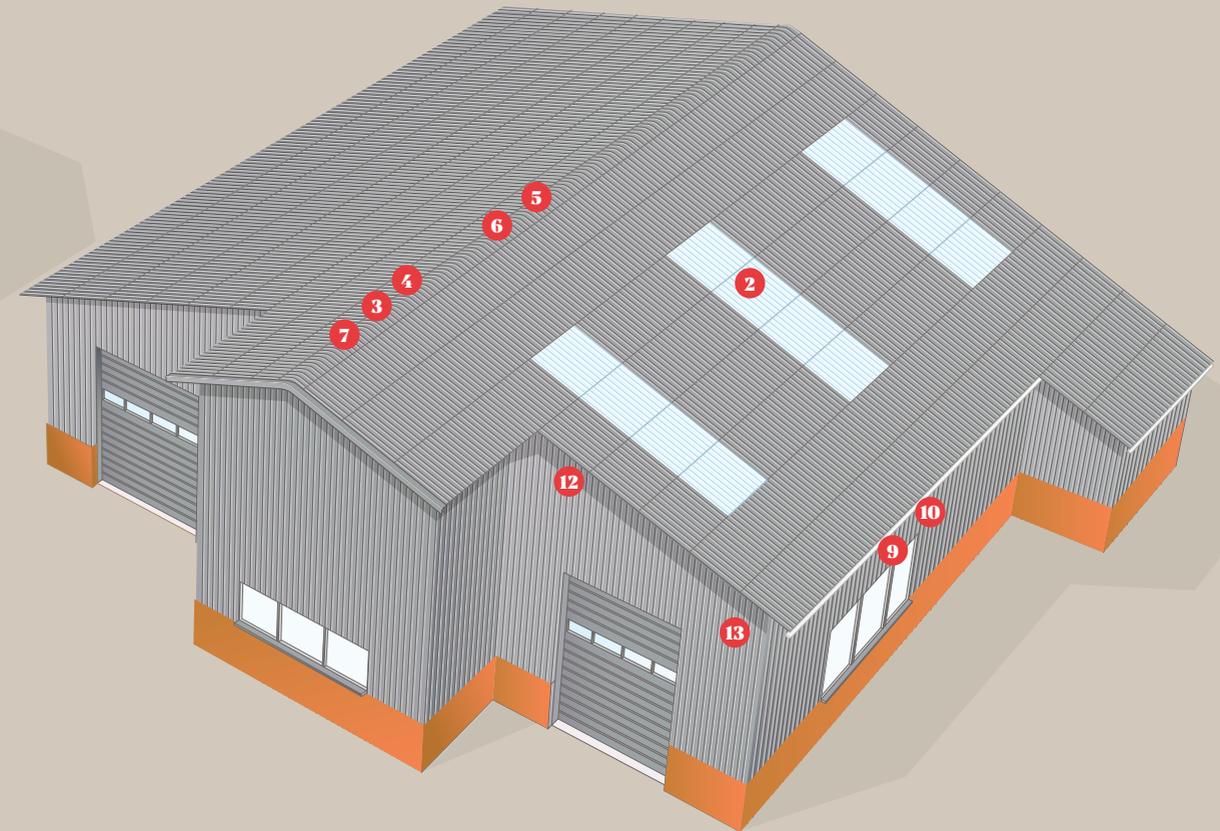
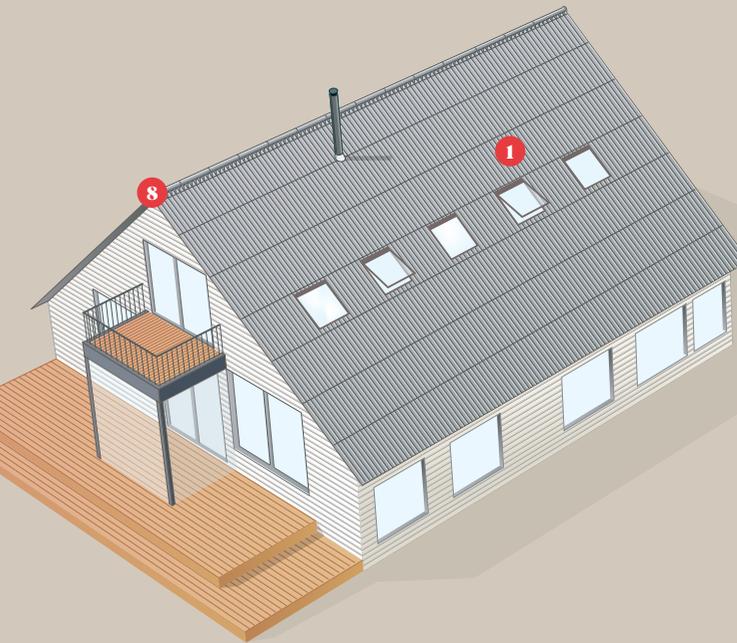
Two-piece ventilating ridge cover, adjustable over range of roof pitches providing natural ventilation



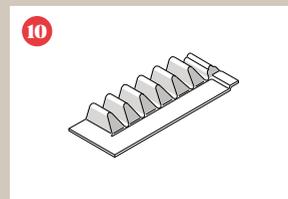
Two-piece plain wing ridge cover, adjustable over range of roof pitches



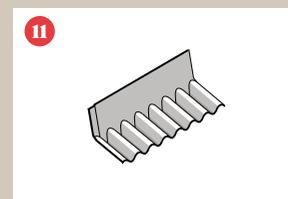
Hooded two-piece ridge finial, made to suit roll top barge boards with two-piece adjustable ridge only.



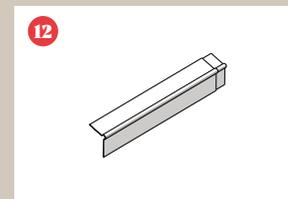
Eaves plastic filler, for blanking off corrugation voids at eaves of roof



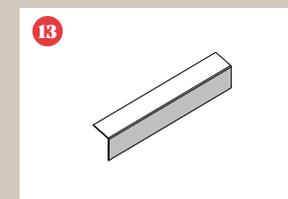
Eaves filler, for blocking corrugation voids at eaves of roof



Apron flashing, for weathering top of mono-pitch lean-to roofs

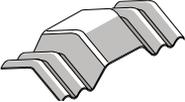


Roll top bargeboard – decorative trim for corner junction of roof and gable-end wall

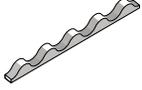
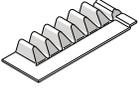
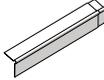
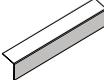


External corner plain wing cover trim for wall-to-wall and roof to gable-end wall

## Profile 6 Accessories

Cranked crown sheet	Girth	Degrees
	750mm	10°
	900mm	12.5°
	1225mm	15°
		17.5°
		20°
		22.5°
Ventilating crank crown	Girth	Degrees
	750mm	10°
	900mm	12.5°
	1225mm	15°
		17.5°
		20°
		22.5°
Two-piece close fitting ridge	Cover width	Degrees
	1016mm	Adjustable
Two-piece ventilating ridge	Cover width	Degrees
	1016mm	Adjustable
Two-piece plain wing ridge	Cover width	Degrees
	1016mm	Adjustable

## Profile 6 Accessories

Hooded two-piece ridge finial		
		
Eaves plastic filler	Cover width	
	1016mm	
Eaves filler	Cover width	Size
	1016mm	Universal
Apron flashing	Cover width	Size
	1016mm	124°
	Handed-left	
Roll top barge board		
	2440mm (2250mm Cover)	
	200mm Wing	
	3000mm (2850mm Cover)	
	200mm Wing	
External corner		
	2440mm (2250mm Cover)	
	200mm Wing	
	3000mm (2850mm Cover)	
	300mm Wing	

## Ten easy steps to fixing

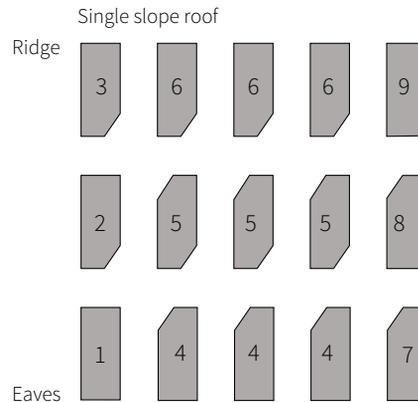
The fixing of a fibre cement roof can be accomplished by most people if they follow these ten easy steps in conjunction with the illustrations opposite. In order to weatherproof the roof, the butyl strip must be installed as described on page 9, and mitres cut to avoid having four thicknesses of sheeting in the same plane at the junctions of sides and end laps.

1. Lay sheet number 1 at the eaves without mitring.
2. Lay sheet number 2, mitring bottom right hand corner as per the illustration opposite.
3. Lay sheet number 3, mitring as per step 2. Continue up the roof slope to complete the first tier.
4. Lay sheet number 4 at the eaves of the next tier, mitring the top left hand corner as per the illustration opposite.
5. Lay sheet number 5, mitring both top left hand and bottom right hand corners as per illustration opposite, and continue up the slope until ready to lay sheet number 6 at the ridge.
6. Lay sheet number 6 at the ridge, mitred as per step 2.
7. Repeat the procedure from and including step 4, working across the roof from eaves to ridge, until there is room for only one more tier to be laid, on the right hand edge.
8. Lay sheet number 7, mitring the top left hand corner. If necessary, reducing the sheet width by cutting down the right hand edge. All subsequent sheets in this final tier should be cut accordingly.
9. Lay sheet number 8 as per step 7, continuing up the roof slope until ready to lay the final sheet at the ridge.
10. Lay sheet number 9 at the ridge without mitring to complete the roof.

### Notes

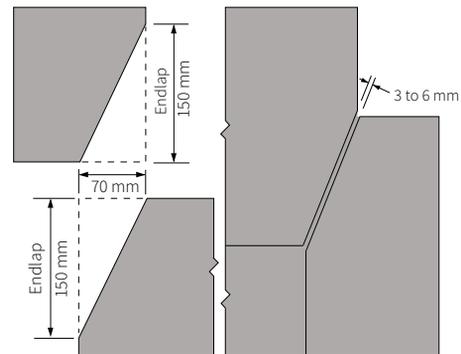
- On a duo pitch roof start both slopes from the same end of the building. One slope will therefore be sheeted left to right, the opposite slope will be sheeted right to left.
- The corrugations of sheets must line up at the apex to ensure that the ridge accessories will fit.
- When cranked crown sheets are used, both top courses of roofing sheets and the cranked crowns themselves must be mitred.
- Always lay sheets with the correct end and side laps, as detailed elsewhere in this booklet.
- **Do not cut mitres in situ.**

## Mitring plan: single slope roof



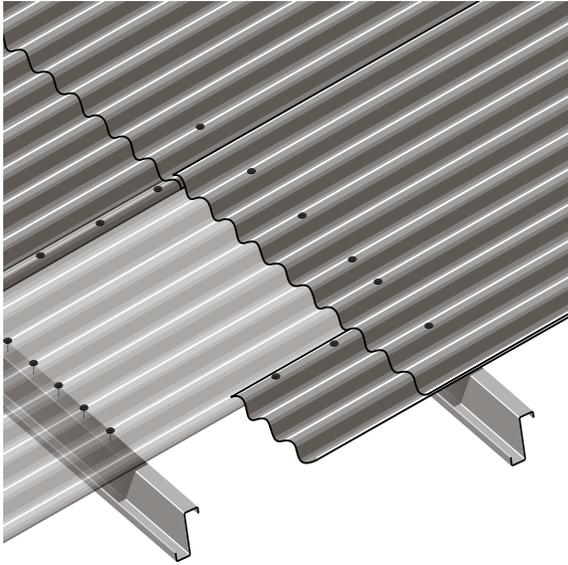
Direction of lay—left to right →  
Mitres opposite hand for laying right to left

### Mitring Profile 6



**Note:** If endlap is 300mm, mitre cut must also be 300mm.

## Translucent sheets



Roof assemblies incorporating translucent sheets should offer the same non-fragile rating as assemblies comprising fibre cement sheets alone. The main difference is that translucent material is thinner and therefore requires more frequent fixing.

Translucent sheet rooflights are laid unmitred, and since the problem of compound layers at end lap situations does not occur, adjacent fibre cement sheets are also left unmitred at these junctions.

The translucent sheets should be supported at each purlin position by profiled fillers, fibre cement sheets, or fibre cement closure pieces.

End laps and side laps should be sealed with butyl tape.

Self-sealing fasteners with a synthetic rubber shank or seam bolts and washers with wide bearings are recommended for side stitching. Self tapping screws and blind rivets should not be used for stitching side laps.

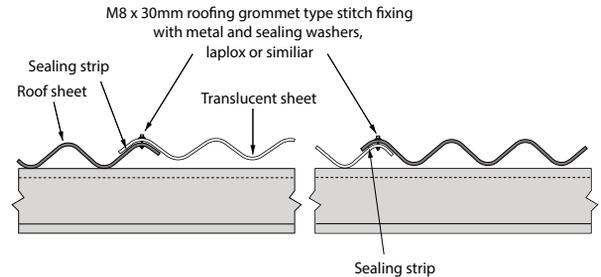
## Fixing translucent sheets

Translucent sheets should be fixed through every corrugation (not including the side laps) to the purlins. The same fixings are used as for Profile 6 sheeting, but the holes for polycarbonate sheets should be 2mm oversize, and for polycarbonate sheets 6mm oversize (for sheet lengths up to 2m, otherwise 9mm oversize). Both side laps should also be stitched to the fibre cement sheets with grommet type stitch fixings (laplox or similar) at 400mm maximum centres.

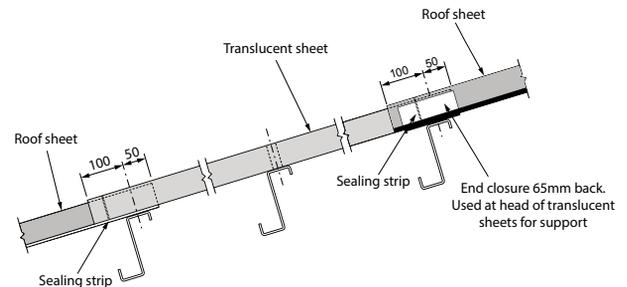
Tapes should be used to separate the translucent sheet from the Profile 6 sheet at all laps as polycarbonate can react with fibre cement. In addition, avoid contact of the fibre cement sheet cutting swarf or drilling dust with the polycarbonate sheet.

Should Euronit translucent sheets not be used, all recommendations of the specialist translucent sheeting supplier should be carefully observed. The fixing recommendations will vary depending on the type, grade and supplier of the material being used.

## Side lap details for translucent sheet rooflights



## End lap details for translucent sheet rooflights

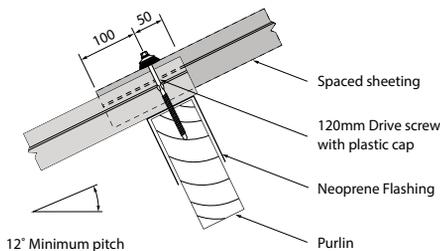


## Spaced Sheeting

Proper ventilation is a critical factor in the housing of farm animals. Euronit has worked closely with the agricultural community in producing a roofing system that can provide high levels of ventilation as well as admit extra natural light.

Profile 6 spaced sheeting is designed to give this extra ventilation creating a much more comfortable environment for animals. It is supplied with each end corrugation trimmed to its apex. This allows the sheet to be fixed with spaces between sheets. Mitring is no longer necessary when fixing spaced Profile 6.

The space between the laid sheets is recommended to be 12mm-15mm for dairy housing and 20mm-25mm for beef housing maximum purlin span is 1375mm. When livestock are removed from the building, rain may enter via the spaces. At these air gaps, the purlins are protected by neoprene flashing (see diagram below).



See page 21

## Advantages of Spaced Sheeting

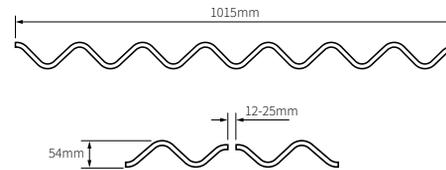
- High ventilation levels and natural light
- Minimizes condensation
- Eliminates mitre cutting
- Fully approved by Department of Agriculture, Food and the Marine
- Colour options for planning requirements
- Fully approved by Irish Health and Safety Authority

**Technical Data:** Refer to page 5

Cranked crown sheets are supplied as standard and are not trimmed.

## Fixing Procedure

Profile 6 spaced sheeting is trimmed on both sides so no sidesheet overlapping is required. All sheets are to be laid with the appropriate gap between them (see diagram below). Sheets must have two fixings per sheet per purlin, one to each full corrugation on each side of the sheet. Fixings shall be through the ridge of the corrugation.



Depending on exposure, a minimum 150mm endlap should be provided. When building on exposed sites, further advice can be sought from our Technical Support Department.

## Ridge Ventilation

The most common system utilized is the raised canopy ridge. Alternatively an open protected ridge can be used. The Department of Agriculture, Food and the Marine have minimum specifications for the structure of Agricultural Buildings, and recommendations for the ventilation requirements necessary for various buildings.

## Roof Pitch

The minimum roof pitch for spaced sheeting is 12°. However, a roof pitch of 15° is recommended for animal housing.

## Purlins

Euronit Profile 6 spaced sheeting may be laid onto timber or metal purlins. The maximum permissible span between purlins is 1375mm. When livestock is removed from the building and the resultant hot, humid, rising air is not present there is a possibility that some rain may penetrate the building. It is therefore necessary to protect the purlins at the air gaps with suitable neoprene flashing material (diagram page 20).

**Profile 6 Spaced Sheet lengths (mm) 1525, 2900 and 3050.**

## Storage and Handling

1. When handling sheets, lift by the ends only.
2. Stack sheets on firm, level ground to a maximum height of 1m. If on bearers, use at least 2 bearers for sheets up to 1.5m long and at least 3 bearers for longer sheets.
3. Protect from damage. Store as close as possible to fixing site, allowing room for handling.
4. Stack smooth face up.
5. Protect from wind by stacking in a sheltered position or by holding down top sheets with ropes, weights or clips.
6. A separate stack should be made of each length of sheet. If this is not possible, stack with the smallest on top and the longest at the bottom.
7. If the sheets have been delivered in shrink-wrapped polythene, this should be retained for as long as possible. Partially used stacks should be protected from the weather by extending the top sheets 200mm at each end.
8. After installation please note that due to the vapour permeability of Euronit fibre cement profile sheeting, dampness may appear on the underside of the sheet. This is a well known temporary phenomenon and will disappear following successive wet and dry periods. It in no way affects the weatherproof quality of the sheets.
9. To prevent efflorescence staining on coloured sheets of Profile 6, they must be kept totally dry prior to fixing.

## Safety

- The structure should be adequately prepared for the sheets.
- The position and fixing of all purlins and rails should be checked before starting sheeting.
- Ensure there is proper access to the roof.
- Installers should not work directly beneath the area being sheeted.
- Provide a scraper at the bottom of all ladders to remove mud from boots.
- Sheeters should wear suitable clothing: wear boots or shoes (not Wellington boots), avoid loose, flapping clothing, avoid trousers with turn-ups.
- Treat as a fragile roof until fixing procedure is completed and always use crawling boards, roof ladders or walkways when accessing the roof at any time.

## Safety (continued)

- Installers should not be allowed to use the roof as a working platform during sheeting.
- Materials should not be stacked on the roof.
- It is possible for one person to safely handle smaller sheets at roof level on a calm day. However, safe handling of profiled sheets on a roof may require two people in certain circumstances.
- Two people are always required to lay the eaves course and the sheets above rooflights.
- Always lay the sheets in the approved sequence.
- Do not cut the sheets in a confined space since nuisance dust will be created.
- Remove all loose material from the roof as the work proceeds.
- Always fully fix the sheets as the work proceeds.
- Do not leave tools on the roof surface.
- Avoid deflecting a sheet whilst attempting to force a bearing.
- Sheets should be laid in tiers from the eaves to the ridge, thereby allowing easier use of crawling boards.
- Correct staging should always be laid over the purlins ahead of the sheeting.
- Where regular access is required to reach rooflights, ventilation and service ducts, properly constructed walkways should be provided.
- Take extra care on a roof during windy, wet or frosty weather.
- Take extra care on painted sheets whose surface will be more slippery than natural grey sheets.
- Do not step on side lap corrugations.

**Always observe the relevant provisions of current legislation governing health and safety at work, including, in the Republic of Ireland, the Safety, Health and Welfare at Work (Construction) Regulations 2013 and, in Northern Ireland, the Construction (Design and Management) Regulations (Northern Ireland) 2016 and the Work at Height Regulations (Northern Ireland) 2005.**

# *Euronit*

## **We're here to help**

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