

HELP INSTALLING A PRODUCT

HEALTH AND SAFTY

A method statement and site-specific risk assessment should be produced to ensure a safe system of work exists before commencing installation to comply with current Health and Safety legislation.

When installing sheeting the user should exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity. Care should be taken of sharp edges when handling sheets, suitable protective gloves, clothing, boots and hard hat should be worn.

PRE ERECTION CHECK PRIOR TO INSTALLATION

Before commencing installation, verify that the following items have been checked and accepted:

PURLINS

A steel or timber purlin support structure is required to support the sheeting at the necessary positions under the sheeting to transfer loads imposed by the sheeting back to the primary building frame or wall structure. The spacing of purlins will depend on the thickness of the sheets used, the pitch of roof, prevalent weather and loading conditions. As a rough guide, maximum spacing of purlins for 0.7mm thickness roof sheets is 1200mm. The purlins should be a minimum of 50mm in width in order to easily screw or nail the sheets down.

Before any works starts, an inspection should be carried out to ensure that the purlin supports are correctly positioned. Any obvious problems should be rectified before fixing of the sheeting. Make sure:

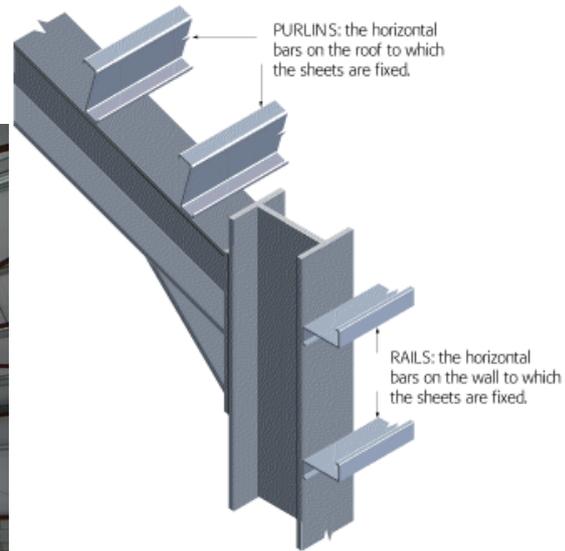
The entire structure to be sheeted has been correctly aligned and levelled.

Purlins are at the correct spacing and are within the specified tolerances.

The corners of the roof are square and the wall framework is perpendicular or as specified.

No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework.

The contact faces between the purlins and the cladding are in the same plane.



ROOF PITCH

The minimum roof pitch for profiled roof sheets is 4°, however roof pitches of 3° are allowed for short lengths. For corrugated sheets we recommend the roof pitch should not be less than 10° and for tile sheet roofs 12°.

SHEET HANDLING

Wherever possible, manual handling should be avoided and mechanical handling equipment should be used. Mechanical handling provides health and safety benefits, shorter installation times, smaller installation teams and less risk of panel damage.

When installing the sheets, position the bundle as close as possible to the rafter line and distribute the pack to allow for an even distribute of load over the roof structure. All packaging should be removed prior to lifting panels onto the roof and packs should be secured to the roof structure to prevent any movement before actual fixing.

WALKING ON ROOF SHEETING

Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Crawling boards should be used when necessary to protect the sheeting from damage when working or walking on roof and walk on at least two profile ribs at a time. When walking across the width of roof sheeting, walk over or close to the purlin supports. Generally keep weight evenly distributed over the soles of the feet. Clean soft soled shoes should be worn. Care should be taken as sheets may be slippery.

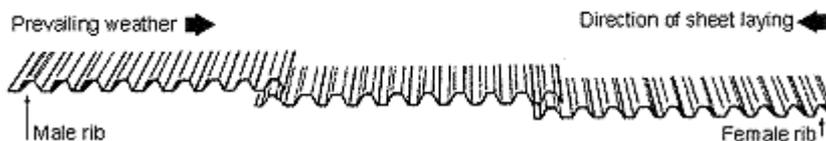
PROTRUSION THROUGH SHEETED SURFACES

Protrusions such as pipes and ducts should be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting.

Depending on the position of the penetration through the roof, special attention should be given to back flashing the sheeting to the ridge or point of water entry up the roof from the protrusion. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugations.

CUTTING SHEETS ON SITE

Sheet Laying



If cutting of sheets onsite is necessary, the use of an angle grinder with a small tooth blade or disc is recommended. Care should be taken to achieve a cut with minimal damage to the sheet, for longer straight cuts, we recommend using a circular saw that produces a cold cut with a fine-tooth metal cutting blade (i.e. not a grinding blade, as this hot cut will damage the coating). For making small cut-outs, openings and cuts that are not straight, use a jigsaw or a reciprocating saw. Reciprocating nibblers are also widely used in the roofing trade and produce an excellent cut.

When cutting roof sheeting take care to protect the sheeting from debris, all swarf and metal debris should be removed from the sheeting to avoid personal injury, sheet damage and avoid rust marks. Whenever possible, cutting should be done on the ground and not over

other coated material. Sheets should be placed face down on padded supports. Cutting should not be carried out on top of other painted surfaces.

LAYING PROCEDURE

The laying of the sheets should commence from the eave, towards the prevailing wind. The side laps will then be away from the wind preventing water from being forced into the lap.

It is very important that the first sheet be laid at right angles to the eave and the ridge so that all the rest will also be straight and perpendicular, if not an adjustment will have to be made on every sheet laid, causing a 'saw tooth' effect at the eave line. This may also happen if the building is not square. The first row of sheets is laid with an overhang beyond the bottom purlin or facer board far enough to drain rainwater into the gutter or beyond the wall. It may be helpful to use a limited number of fixings on the first few sheets laid until you are sure they are in line. If they are, put in the rest of the fixings and carry on, if not there are less fixings to remove and less chance that fixings may then miss the purlin when sheets have to be adjusted and re-fixed.

FIXING PROCEDURE

Apart from just attaching the sheets to the frame work, the fixings have to withstand considerable wind pressures be weather-proof and durable. In profiled metal roofing and cladding applications, self-drilling 'TEK' type screw fixings are used. They have a 5/16th hexagonal head that fits into a drive in either an electric driver or a drive attached to a drill with a slow speed screwdriver setting and a clutch or torque setting. These screws have a drill point for drilling through the sheet and the purlin then tapping the screw into the purlin. Under the screw head there is a 19mm stainless steel washer with a bonded neoprene pad that compresses when fixed to create a seal with the roof sheet. TEK screws come in various lengths from 25 to 150mm, we supply the following:

Sheeting type	Wood purlin	Light steel purlin	Heavy steel purlin
34/1000 box profile	TF32-S19	LS25-S19	HS38-S19
13/3 corrugated	TF65-BAZ	LS57-BAZ	HS55-BAZ
Tile sheet	TF32-S19	LS25-S19	HS38-S19
40mm Insulated sheets	TF80-S19	LS57-S19	HS55-S19
60mm Insulated sheets	TF105-S19	LS85-S19	HS75-S19
80mm Insulated sheets	TF125-S19	LS115-S19	HS105-S19
100mm Insulated sheets	TF150-S19	LS135-S19	HS125-S19

TEK screws are fitted through the lower trough or pan section of the profile, or if fixing corrugated sheeting, through the crest of the profile using a longer screw with a soft BAZ washer. It may be helpful to use a centre punch to put an indentation in the sheet at the point you want the TEK screw to go through the sheet to keep the screw on course when drilling. Make sure fasteners are not over tightened as this can burn off the soft neoprene pad under the washer and clean away drill swarf to avoid rust marks on sheets.

Corrugated sheeting can also be fitted to wood purlins using springhead or drivescrew nails with spat washers. Due to the larger expansion and contraction rates of fibreglass GRP and PVC plastic sheeting, oversized fixing holes must be pre drilled in these sheets, otherwise install screws in the same manner as metal. Under average conditions, the fixings should be placed at every second corrugation or trough on the purlin. A stretched string along the purlin line makes it easier to keep the fixings in line when the sheet is laid on the purlins. Extra fixings are needed along the verge overhang. Roofs in exposed positions require closer fixing.



SIDE LAPS

It is generally considered good practice to use mastic lapping tape between sheet laps and use stitching screw fasteners at the overlapping joint. Lapping tape is a 9 x 1.5mm section of grey mastic on a roll, this should be run along the flat crest point of the last profile that is about to be lapped by the next sheet. Make sure that the next sheet is in line before laying it down as separating two sheets once the lapping tape has made contact can be difficult. Then fix stitching screws at 600mm centres down the lap to bond the adjacent sheeting together. This is recommended to maintain a weather resistant joint.



END LAPS

At all end laps where a sheet overlaps another sheet below it, a minimum of 250mm overlap should be provided and laps must be supported by a purlin. A strip of lapping tape sealant should be placed across the full width of the lap approximately 25mm from the end sheet.

Gaps in the pans/trough of dissimilar materials (metal sheet and GRP roof lights) can occur. Lapping tape fills up these spaces much more effectively than silicone. The end lap fixing methods are the same for metal onto GRP sheets, GRP onto GRP, or GRP onto metal.

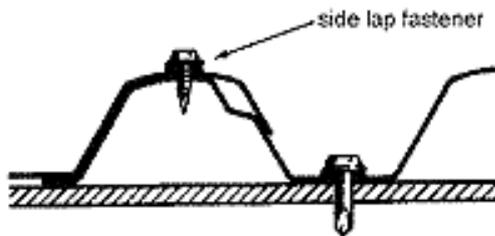


SEALING PROFILES AT FLASHINGS

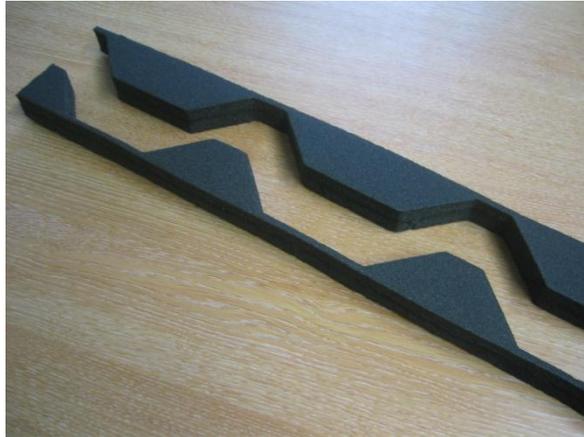
Roof sheets and flashings are not easily reshaped after manufacture, so if the roof is to be made weather tight, special profile seals to fill in gaps under the sheet at the eave and over the sheet under the ridge flashing will be required. A foam filler/closure strip matching the profile of the sheeting is provided to seal the corrugations or pans of the profile. These come in the same width as the sheet, 1 metre and are supplied as an 'eave filler' to go under the sheet profile, or as a 'pair', 1 eaves filler and 1 opposite ridge filler to go over the sheet.

The foam filler closers should be bonded to the pans or valleys of the sheeting with a flexible waterproof silicon sealant and should be continuous over the entire width of the sheeting.

Valley Fixing for Roofing and Side Cladding Sheeting (shown to steel or timber)



Note: Do not over-tighten screws.
Fastener Holes: Do not use punches to form fastener holes. Use correct size drill to suit fasteners or self-drilling screws.



CLEANING OF ROOF

All debris, swarf etc. arising from the fixing of the cladding should be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners and sealants, off-cuts of flashings and sheeting, food packaging etc. should not be left on the roof or in the gutters.

Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the gutter outlets, down pipes, etc.