



FIXER

FLAT ROOFING



GRP

The Performance Glass Reinforced Plastic System specifically designed for roofing

**20 YEAR
GUARANTEE***

**25 YEAR
GUARANTEE***

PRODUCT SELECTOR & QUICK INSTALLATION GUIDE

FIX-R

FLAT ROOFING

FIX-R GRP THE PERFORMANCE GRP ROOFING SYSTEM OF CHOICE

FIX-R have been at the forefront for many years supplying the roofing market with quality flat roofing systems and this is no exception with the introduction of **FIX-R GRP**, developed alongside trusted installers and manufactured to the highest standards using only virgin materials in its production.

Contents

- Introduction
- GRP Product Range
- Recommended GRP Tools & Associated Equipment
- Types of Edge Trims and where to use them
- GRP Quick Installation Guide
- GRP Trims Installation Guide
- Catalyst Addition Chart
- Materials Usage Guides
- Frequently Asked Questions

Why FIX-R

We not only ensure that the products are fit for purpose and meet regulatory requirements, but meet your standards of usability and quality. This is achieved through our close relationships with manufacturers, technical understanding of the marketplace and continued investment in finding the right solution for the job in hand.

You can purchase FIX-R products with the confidence that we will be here to support you now and in the future, as we:

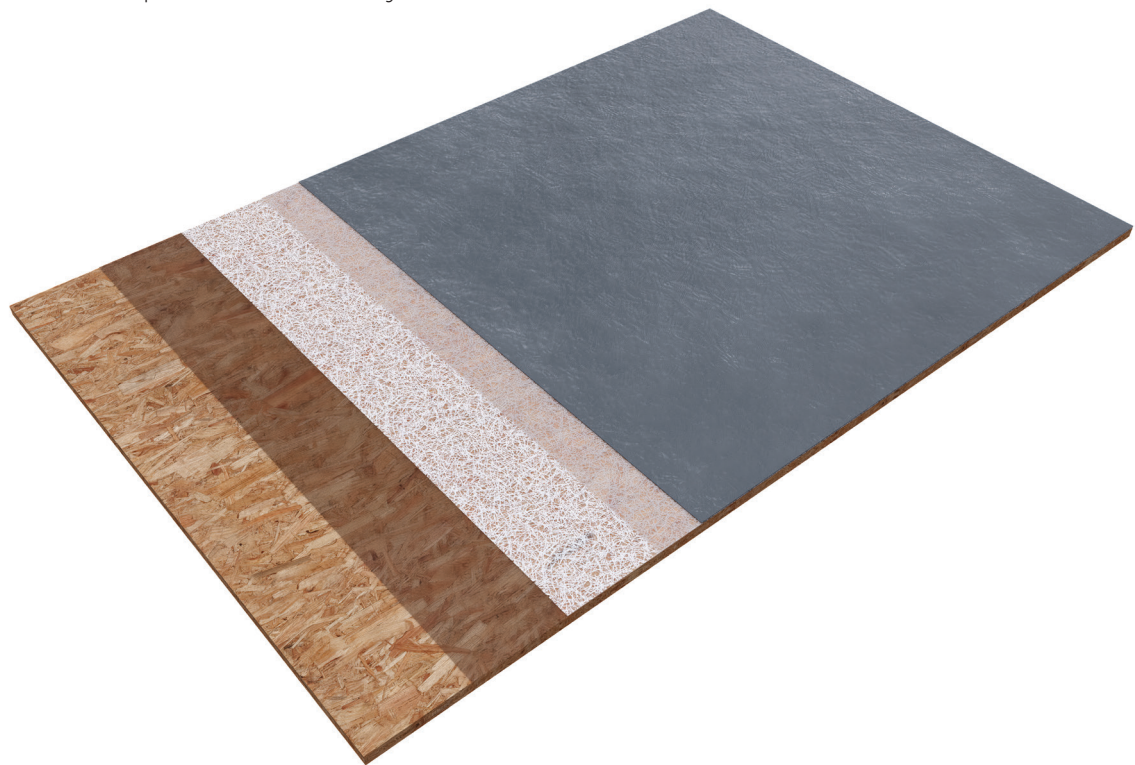
- Support customers with technical advice.
- Work with trade associations, training and testing organisations.
- Have an in-depth understanding of market and legislative compliance.

Simple and fast installation with the FIX-R GRP system and accessories

WHAT MAKES FIX-R GRP THE RIGHT CHOICE FOR YOU:

- 20 (450g CSM) & 25 (600g CSM) Year Material Guarantee's on system.*
- Materials specially developed and designed for roofing.
- Superior `wet-out' of resin with fibreglass reinforcement.
- High grab and final bond strength to 18mm OSB 3.
- Controllable cure system that can be adjusted with hot and cold weather conditions.
- UV resistant topcoats with ease of application.
- Tough and weather resistant finish.
- Long term performance with use in areas such as extensions, garage roof, balconies, walkways and industrial roofing.
- Anti-Slip option for topcoats.

Whether it's a small or large flat roof, a refurbishment or a new build, our GRP system is the perfect choice for you.



**20 YEAR
GUARANTEE***

**25 YEAR
GUARANTEE***

*Please refer to Materials Usage Guide on page 25.

FIX-R

FLAT ROOFING

GRP PRODUCT RANGE



FIX-R GRP Performance Resin

Developed to achieve a consistent curing speed when used with the standard FIX-R GRP Catalyst.

Features:

- Available in 5, 9 & 18kg tins 1.25kg/m² coverage approx with 450g csm.
- Designed to be used with FIX-R GRP Catalyst and FIX-R GRP Chopped Strand Matting.



FIX-R GRP Performance Topcoat

Specially formulated to give the optimal finish to your GRP project. With excellent coverage and application viscosity, designed not to run and sag whilst applying.

Features:

- Available in 5, 9 & 18kg tins 750g/m² coverage approx.
- Available in mid grey, other colours are available subject to minimum order quantity.



FIX-R GRP Standard Catalyst

FIX-R GRP Catalyst is used to start the reactive curing process for FIX-R GRP Performance Resin & Topcoat.



FIX-R GRP Iron Silicate

Iron Silicate enables our GRP system to be used for walkways and balconies creating an anti slip surface.

Features:

- Available in 5kg, 10kg buckets and 25kg bags.



FIX-R GRP Woven GRP Tape

Woven tape is used to bandage the joints in square edged OSB3, join roof edge trims & corners together and cover/fill small gaps, producing a clean and neat finish. Simply cut the required length and wet out with resin onto the surface.

Features:

- Available in 50m rolls in 50mm, 75mm & 100mm widths.



FIX-R GRP Chopped Strand Matting

A randomly chopped strand matting used in the layering and continuous lamination of FIX-R GRP installations.

Features:

- Consistent quality, thickness and rigidity.
- Rapid wet out and air release.
- Excellent formability for small radius moulds.
- Good mechanical properties.



FIX-R GRP G4 Sealer/Primer

An easy to use sealer/primer, that seals moisture out from surfaces prior to laying FIX-R GRP. Being moisture cured it can be applied in challenging conditions, down to 0°C and in high humidity.

Features:

- Seal damp out of concrete, brick, stone, wood and lead with a non-porous plastic coating.
- 1kg will cover approximately 2 - 2.5m².
- Improves the bond of GRP to metal and/or wood.



FIX ALL High Tack Trim Adhesive/Sealer

A high quality, single component joint sealant with high adhesive strength. In addition this product is both weatherproof and waterproof, which makes it ideal for FIX-R GRP System.

For use with FIX-R GRP Trims prior to mechanically fixing.



FIX-R GRP Acetone

Used to clean uncured resin and topcoat from brushes, rollers and other equipment. Please note this material is highly flammable. Available in 1, 5 or 25 litre packs.

FIXER

FLAT ROOFING

GRP TOOLS & ACCESSORIES



Catalyst Dispensers 15ml & 80ml

Catalyst Measuring Cup 500ml

2.5, 5 & 10L Buckets

Paddle Rollers (Available in 70 x 21mm, 140 x 21mm, 180 x 21mm, 180 x 40mm, 225 x 40mm)

Fin Rollers (Available in 35 x 12mm, 70 x 12mm)

Large Bubble Buster Roller
(Available in 140 x 21mm, 225 x 21mm)

Resin Application Rollers (Available in 3", 6", 7" & 9")

Roller Frame Only (Available in 3", 6", 7" & 9")

Resin Roller Refills (Available in 3", 6", 7" & 9")

Push Fit Roller Frame (Available in 6", 7" & 10")

Topcoat Roller Refill (velour) (Available in 5", 6", 7" & 10")

Telescopic Pole 80cm - 140cm with Taper & Screw Cone

Wooden handled brushes (Available in 2", 3" & 4")

Plastic handled brushes (Available in 2", 3" & 4")

Disposable Powdered Gloves Large box of 100.

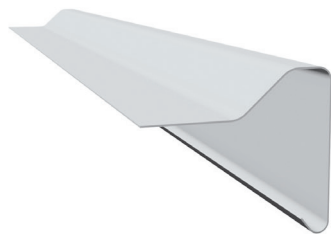
Roofing and tool kits available, please ask for details

GRP ROOFING TRIMS

Our GRP Roofing Trims are manufactured in the UK using quality resin and glass fibre. All trims are finished in a light grey colour and cut to a 2.5m length, designed for ease of handling and to reduce waste on installations with the exception of both the “F” range and corner trims. The trims have a high adhesion matt finish to the outer face for the GRP laminate and topcoat.

- Standard 2.5m length.
- Consistent weight and thickness.
- Easy jointing - simple overlap by 50mm.

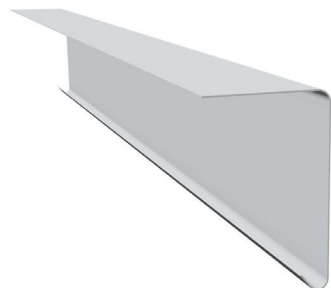
See Installation Guide for full fitting instructions.



FIX-R GRP B240/B260 Trims

Raised edge trims are used to channel rainwater away from the edges to the guttering. Fascia should be pre-fitted with batten to ensure the trim is supported.

- B240 (100 x 105mm)
- B260 (130 x 125mm)



FIX-R GRP A170/A200/A250 Drip Trims

These trims are fitted to lowest edge of the roof of roof where water flows into the gutter allowing for drainage.

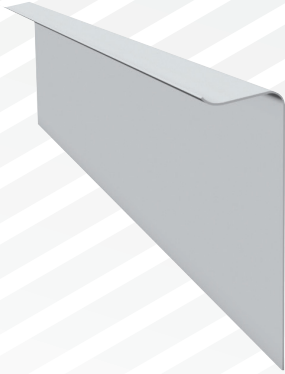
- A170 (75 x 84mm)
- A200 (95 x 90mm)
- A200A (90 x 90mm) - same A200, but with drip return
- A250 (95 x 140mm)

FIX-R GRP C1/C2/C3/C4 Corner Trims

Corner trims are used to neatly join and finish the roof trims and are designed to fit all depths as they can be cut to fit the trims being used.

- **C1 Universal External Corner Trim** - forms a left or right hand corner. Use with the “A” and “B” range of trims.
- **C2 Fillet to Corner Trim** - are used where a flat roof meets an abutting wall. Use with the “A” range, “B” range and “D260” trims.
- **C3 Internal or External Fillet Corner Trims** - used as a preformed internal or external corner. Use with a “D260” trim.
- **C4 Universal Internal Corner Trim** - forms a left or right hand corner. Use with the “A” and “B” range of trims.

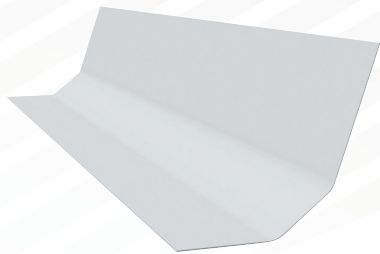
Trim colour may vary from those illustrated.



FIX-R C100/C150 Simulated Lead Flashing

Simulated lead flashing trims with two different depths - these are used to finish the D260 wall fillet and should be bonded using Fix-All adhesive.

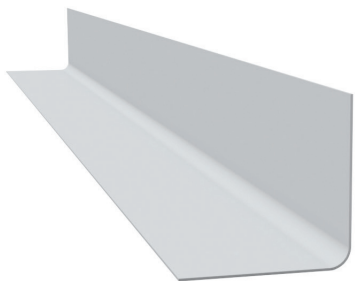
- C100 (35 x 100mm)
- C150 (35 x 150mm)



FIX-R D260 Wall Fillet

Wall fillet used to fit up wall to allow for expansion of the roof.

- D260 (120 x 60 x 80mm)



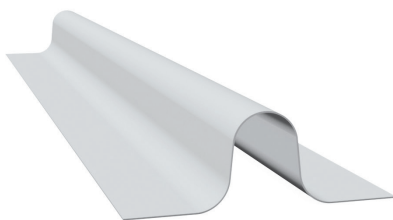
FIX-R G150/G275 External 90° & H150/H275 Internal 90° Angle Trims

For use in areas such as walls and steps when the laminated surface sits flat to a perpendicular surface.

Finishing on the G trims is on the outer face.

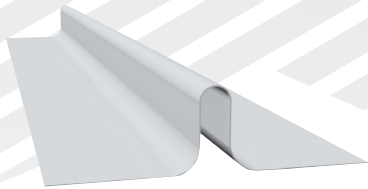
Finishing on the H trims is on the inner face.

- G150 (75mm x 75mm)
- G275 (200mm x 75mm)
- H150 (75mm x 75mm)
- H275 (200mm x 75mm)



FIX-R E280 Pre-formed Expansion Joint/Ridge Roll

Used on both the creation of expansion joint on roofs 50m² and above and to create a lead roll effect when joining the GRP roof to adjoining felted roofs.



FIX-R ER40/30 Pre-formed Rib Detail

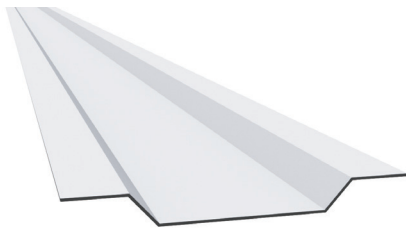
Trim used to create raised rolled lead joint effect.

- Use the C6 closures to cap the ends
- ER40/30 (50 x 40mm)



FIX-R C5 & C6 Closure Trims

- The C5 roof ridge closure is used to finish E280 trim.
- The C6 roof ridge closure is used to finish ER40/30 trim.



FIX-R G180 Gutter Trim Expansion Joint

G180 Gutter trim for creating expansion joints on areas of 50m² or larger as well as creating a drainage channel, a sufficiently size channel needs to be cut into the deck for the trim to sit in.

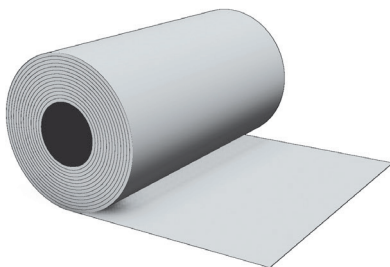
- G180 (15 x 140mm)



FIX-R J380 35° - 50° Flexible Internal Angle

For use on internal angles between 35° and 50° from a flat surface.

- J380 (85 x 300mm)



FIX-R F300, F600 & F900 Flat Sheets

Preformed rolls of flat GRP flashing for use between flat and pitched roofs as well as other areas shown in trim guide.

- F300 (300mm x 20m roll)
- F600 (600mm x 20m roll)
- F900 (900mm x 20m roll)

Simple and fast installation with the FIX-R GRP system and accessories

FIX-R

FLAT ROOFING

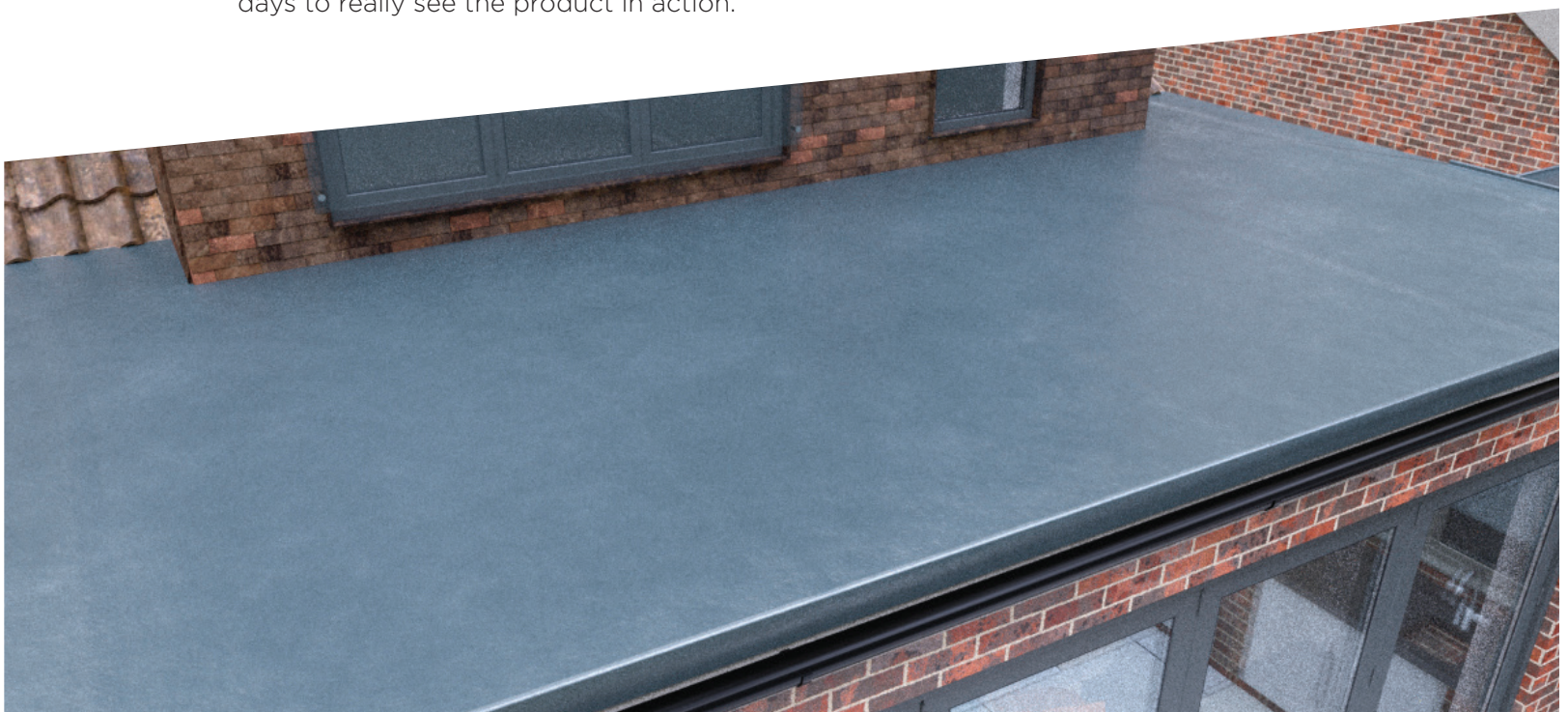
GRP QUICK INSTALLATION GUIDE

Simple and fast installation with FIX-R GRP System and accessories.

This guide and datasheets are available at www.fix-r.co.uk. The key to any work is good preparation and making sure you are familiar with the 'Do's & Don'ts' of laying FIX-R GRP before starting, take time to familiarise yourself with this guide and make it a great FIX-R GRP experience every time.

A. Preparation

- 1 Before starting make sure that the weather forecast is fair as rain will affect the cure and finish of any GRP system, ensure areas around the installation that are liable to resin splashes/drips are covered or moved where possible, such as vehicles, windows etc.
- 2 Remove any old roof coverings, chippings or rotten wood for over boarding or full replacement using 18mm OSB 3.
- 3 Ensure temperature is above 7.5°.
- 4 All materials should be stored suitably between 15-25° before use.
- 5 Use the material estimation guide to make sure you have everything you need to do the job.
- 6 Read the catalyst addition guide to take account of the temperature on the day of installation.
- 7 If your not sure of anything, stop and ask our technical team for help and guidance, we always recommend asking about our training and demonstration days to really see the product in action.



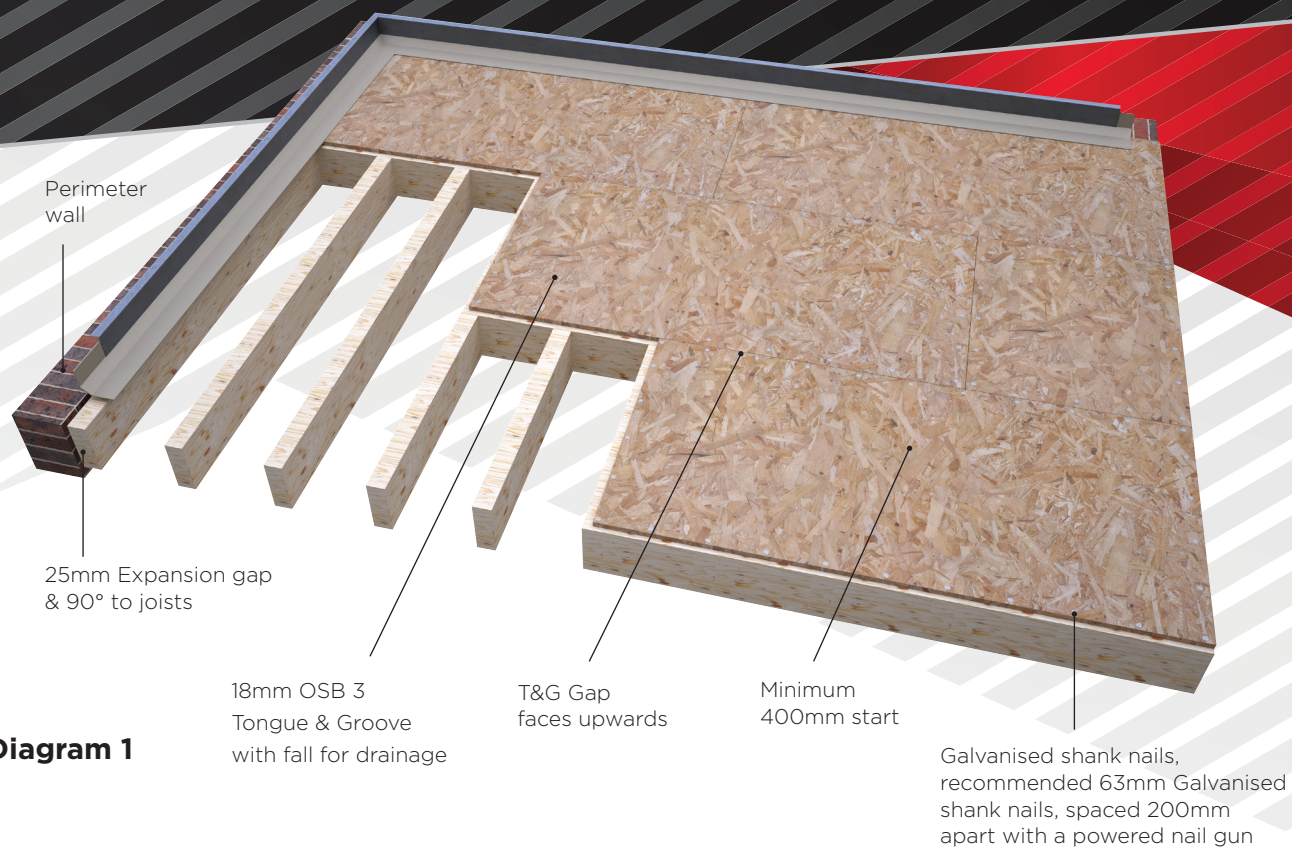


Diagram 1

B. Preparing the deck

Like any good construction it's only as good as its foundations and the same is true for GRP, please read through the guidelines below if you are preparing the deck or pass along to the contractor who is, so you can be sure you're ready to go.

Key Features/Benefits:

- 1 Examine existing roof boards and either remove if rotten or warped, or overboard if suitable, ensuring that all existing roofing materials such as felt, bitumen, single ply etc is removed prior to over boarding. Whether overboarding or laying a new deck it is vital that the boards are not exposed to rain or excess moisture prior to applying the FIX-R GRP system as this can lead to movement of the boards and potential failure of the roof.

NB If using 18mm Tongue & Groove OSB 3 board have the gap of the tongue & groove facing upwards when laying. If laying square edge OSB3 the joints must be taped using the 75mm FIX-R GRP Woven GRP Tape.

- 2 The boards must be laid 90° to the joists or existing boards ie across joists/boards and not inline (See diagram 1) making sure there is sufficient fall built in to allow the surface to drain without standing water. When laying next to a wall allow a 25mm gap between the board and wall, this allows for the movement of the roof during hot and cold weather and avoids the excessive noises associated with poorly installed decks. Finish the board flush to the fascia and then stagger the next row of board with a minimum of 400mm board to start.
- 3 Fix the boards with a galvanised ringshank nail (recommended 63mm) to penetrate the joists by 40mm the fixings should be spaced 200mm apart. We recommend a powered nail gun to fix the nails in place as this makes the job considerably quicker and avoids damaging the ceiling below. Standard hammers can be used in areas that have no ceiling below, please ask about the correct fixings when installing a roof with insulation.
- 4 It is vital to note that any one flat area above 50m² must include an expansion joint (see GRP Trim Installation Guide from page 17).

C. Applying the GRP Trims

FIX-R GRP trims are essential for giving the finished roof its performance and appearance to your customer, having consulted the industry widely, our trims have been designed to be easier to handle, transport and fit with less waste, saving time, money and the environment.

- 1** There are a full range of trims and each have a different use (see Trim Installation Guide for sizes and use). When you have selected the correct trims for the job the same application details apply to the range.
- 2** The trims should be fixed to the perimeter of the roof (diagram 2), apply a 6-8mm bead of Fix-All adhesive/sealer on the perimeter of the OSB 3 for the trim to bed in, use 13mm clout nails/staples to fix the trim into position. Firstly fix each end of the trim, then the middle and then in between with spacing of approx. 200mm between, note that trims have a matt surface and a gloss surface, the matt surface should always be used to overlay with the resin and fibreglass matting.
- 3** When using drip trims (A170/A200/A250) it is recommended to use an electrical planer to remove 2mm of the OSB 3 at the perimeter to allow the trim to lay flush with the deck to prevent any drainage issues/ponding.
- 4** Apply the 75mm woven glass edging tape with approximately half on the trim edge and half on the OSB 3, in preparation for the resin and fibreglass layer (See diagram 3).
- 5** Corners should be selected and used to ensure the best fit between drip trims, raised edge trims and where the trims terminate against the wall.
- 6** Where the edge of the OSB 3 meets a vertical wall a fillet trim must be used (D260) to bridge the 25mm expansion gap and form the upstand, this is then finished off with the simulated lead flashing trim (C100) which must be rebated into the brickwork/mortar line by using an angle grinder to make a 35mm chase cut, this forms protection from water coming down the brickwork and behind the fascia trim. Bond the (C100) into place using Fix-All adhesive/sealer.

Diagram 2



D260 Fillet/Upstand
with C100 type
simulated lead flashing

35mm Rebate into
brickwork/mortar line

Raised edge trim
B260/B300

Diagram 3



75mm Woven GRP Tape

FIX-R

FLAT ROOFING

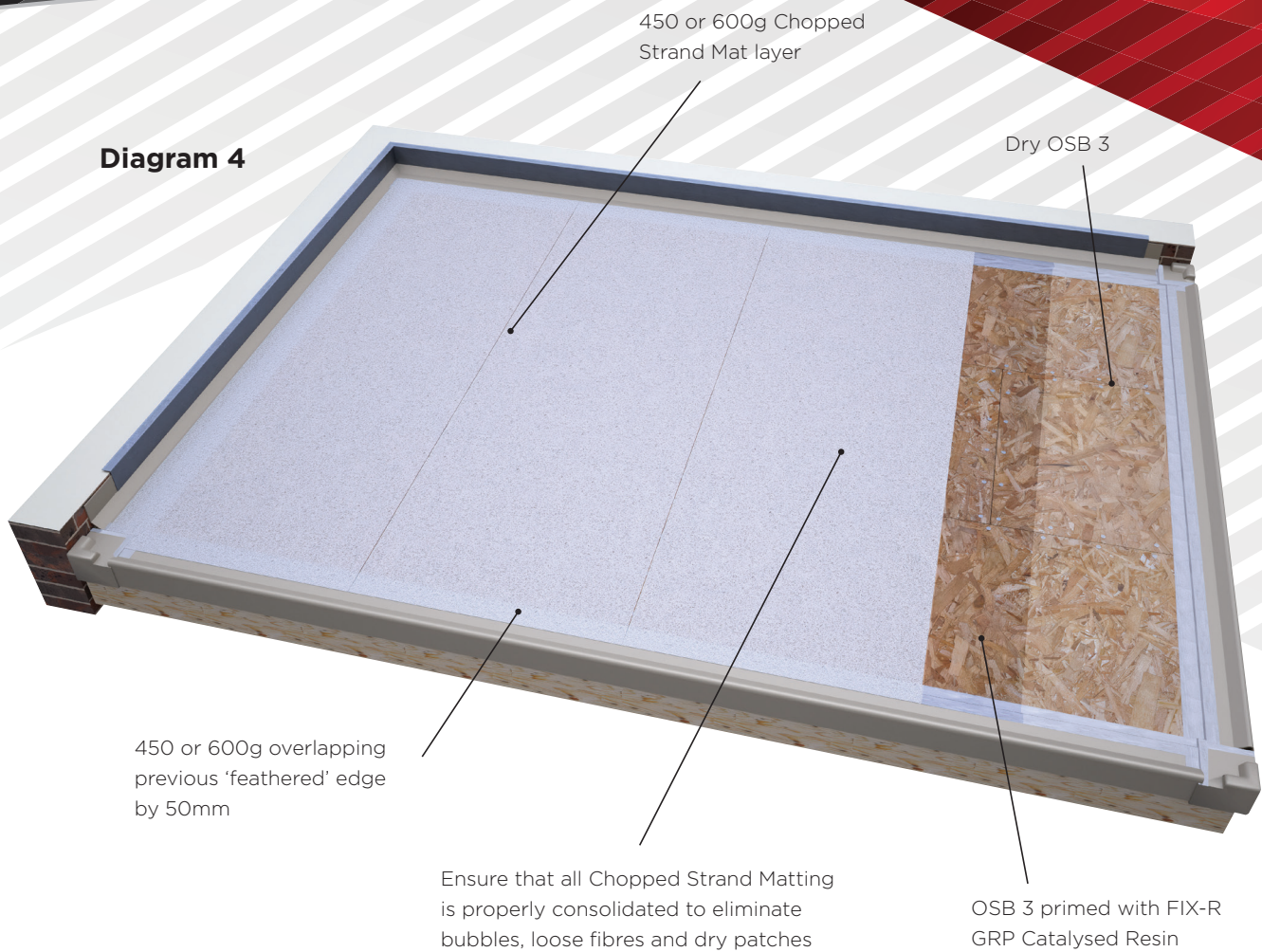
D. Applying the GRP

FIX-R GRP Resin is a quality virgin resin designed to meet the needs of the installer. Before commencing work it is essential you calculate the amount of materials you will need, a materials calculator guide is shown later in this guide. It is also important to note the catalyst addition rate needed depending on the temperature (see addition rate guide).

Prior to commencing the main work mix up the resin you require to laminate the reinforced glass tape used on the edge trims and corners. This will help you decide on what working time for the main installation of the chopped strand mat will suit you, the normal working time for the resin should be around 20 minutes per mix, never mix a container above 5kg in weight as this will potentially cure in the container if you cannot lay it in time.

- 1** Ensure your OSB 3 board is clean and dry and that all your trims are fixed in place, always ensure that the Chopped Strand Mat has been stored in a dry place and that it has not been in contact with damp or water as this will severely impair the systems performance and invalidate the guarantee. Chopped Stranded Matting is normally laid at 90° to the direction of OSB 3 as shown in diagram 4. When mixing the resin only make up enough for one or two rows of 2-3 metres maximum as you need enough time to consolidate the matting before laying the next row.
- 2** Prime your dry OSB 3 with your resin mix, whilst wet lay your first pre-cut length of matting. This helps to ensure a full bond and holds the matting in place whilst laying. You will need approx. 1.25-1.5kg of resin per m² depending on the weight of the CSM you are using. When applying resin always use a long pile fluffy roller (18mm pile), we recommend a minimum 6" wide for the main application on an extension pole. Be wary of buying 'DIY' rollers as these haven't been tested with the FIX-R GRP system and can fall apart whilst in use.
- 3** Select the correct weight of Chopped Stranded Matting for either the 20 year (450g) or 25 year guarantee (600g). Your matting has two edges, one a straight cut and the other a 'feathered' edge. The cut edge is laid onto the trim edge with the 'feathered' edge forming the start of the next row. When laying the next row it should overlap the 'feather' edge by a minimum of 50mm to ensure a continuous bond.
- 4** Use the correct consolidation tool (either paddle/fin or bubble buster roller) to ensure that all the fibres of the matting are flat and that you have no trapped air or areas of the matting without sufficient resin, if carried out correctly you will have no standing fibres, bubbles, pinholes or white fibres of the matting showing. The laminate should go semi transparent and you will be able to see the OSB 3 through the row. When this is done continue to lay each row, please note you do not need to fully cover the main trims (i.e. drip, raised and upstand) finish the matting so it covers the taped seams.

Diagram 4



5 Prior to laying the Topcoat a few simple processes will greatly enhance the finished look and durability of the roof. Once the GRP resin layer has hardened (1-2 hours depending on temperature) use a flexi sanding head on an extension pole with a 40-60gsm sandpaper to lightly sand the main area, this ensures that any high spots, raised fibres and rough edges are smoothed. Use a small sanding block on the corners or hard to sand areas.

6 Tools or resin drips can be cleaned with FIX-R GRP Acetone cleaner whilst the resin is in its liquid form. Do not use on skin and always wear correct PPE such as gloves, eye protection and dust mask.

NB - Never lay on wet boards, never lay in the rain or if its likely to rain within 30-40 minutes of starting. If it does begin to rain, cover the roof and ensure that any cover does not come in contact with the wet resin as it will stick.

NEVER leave the catalyst or acetone in the sun or near ignition sources as both are classed as highly flammable and never confuse FIX-R GRP acetone cleaner for FIX-R GRP Catalyst.

E. Applying the Topcoat

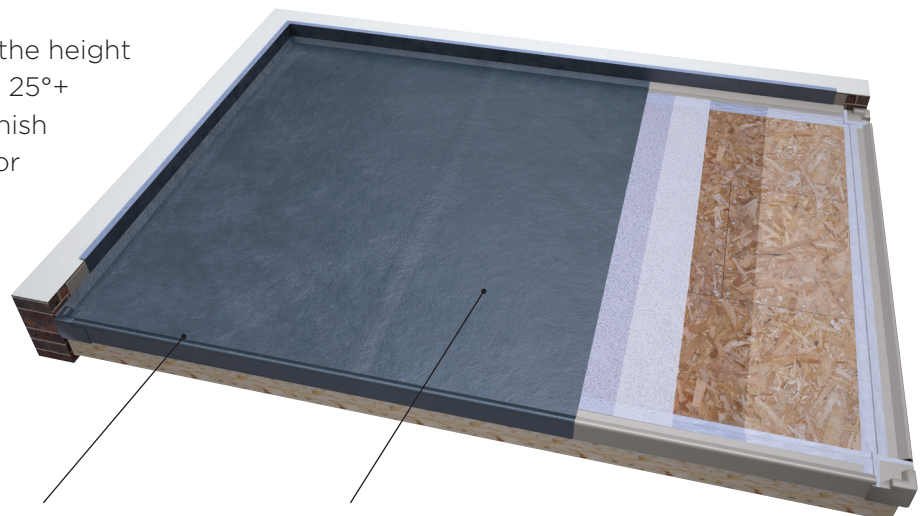
FIX-R GRP Topcoat has been specially formulated to give the optimal finish to your GRP roof, with excellent coverage and application viscosity, designed not to run and sag whilst applying.

Ensuring that the FIX-R GRP resin layer is cured you can then proceed to apply the Topcoat. Topcoats are a vital layer to protect against the sun and UV weathering but unlike the resin layer it does not have reinforcement so can become brittle and crack if applied too thickly so you should never exceed 0.5 to 0.6mm in thickness. Putting down a thicker layer will not give any better performance and in most cases will be detrimental so take care that you don't get a build up in low lying areas such as expansion joints.

- 1** When calculating use you should allow approx. 750g per m² to give the correct coverage rate. Note you should calculate for around 5% loss of materials due to residues on tools and buckets etc.
- 2** Mix the topcoat in the same manner as the resin and again don't catalyse more than you can use within 15-20 minutes, use a shortpile Velour roller to apply a smooth pinhole free coating. We recommend that you paint the GRP trims and corners prior to doing the main work, care should be taken that runs and drips are avoided as there maybe windows, vegetation or vehicles below. Topcoat should be showerproof in around an hour depending on the level of catalyst used and the temperature.
- 3** It is possible to create an anti slip finish by using FIX-R GRP Iron Silicate, this can either be mixed in with the topcoat prior to application (approx. 10-15%) or can be broadcast by hand onto the wet topcoat.

NB - Never lay on a wet surface, never lay in the rain or if its likely to rain within 30-40 minutes of starting. If it does begin to rain, cover the roof and ensure that any cover does not come in contact with the wet topcoat as it will stick.

Never lay the topcoat at the height of the day in hot sunlight 25°+ as this could affect the finish and look of the Topcoat or before nightfall in the winter where the temperature is likely to fall rapidly.

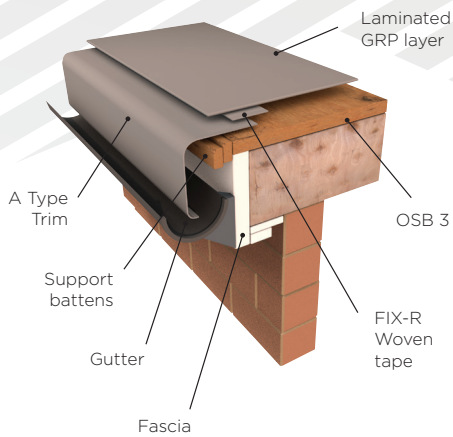


Topcoat all trims to match finish

Topcoat main area with Velour/Short Pile Roller: 0.5-0.6mm thick (725 -750g per m²)

Diagram 5

GRP TRIMS INSTALLATION GUIDE



A170/A200 & A250 Drip trims in situ

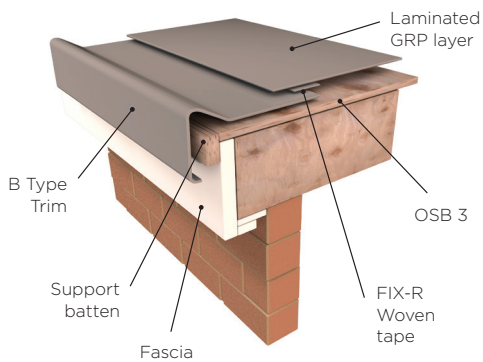
These trims should be fitted to the lowest point of the roof to allow for the flow of water into the gutter.

Support battens should be used to create a gap from the gutter to stop the trim flexing out of position - fix in place with FIX All adhesive.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.



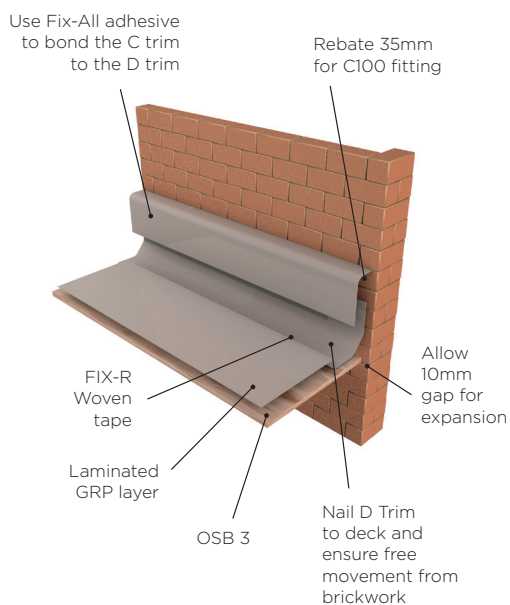
B240/B260 & B300 Raised edge trims in situ

The trims should be used to prevent water flowing over the edge of the roof with the use of batten to support the trim and prevent flexing out of position. Fix in place with Fix All adhesive.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.



D260/C100 & C150 Wall fillet and simulated lead flashing in situ

D260 trims should be fitted against walls to provide an upstand and to allow for a 25mm gap of the deck board from the wall.

C Trims should be used to complete a water tight finish and to rebate the mortar line about the D260 trim to a depth of 35 - 45mm. The edge of the C Trim should be fitted in the rebate and sealed with Fix All adhesive.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat. NB do not topcoat the C trim as it is not required.

FIXER

FLAT ROOFING



F300/F600 & F900 Flat flashing in situ

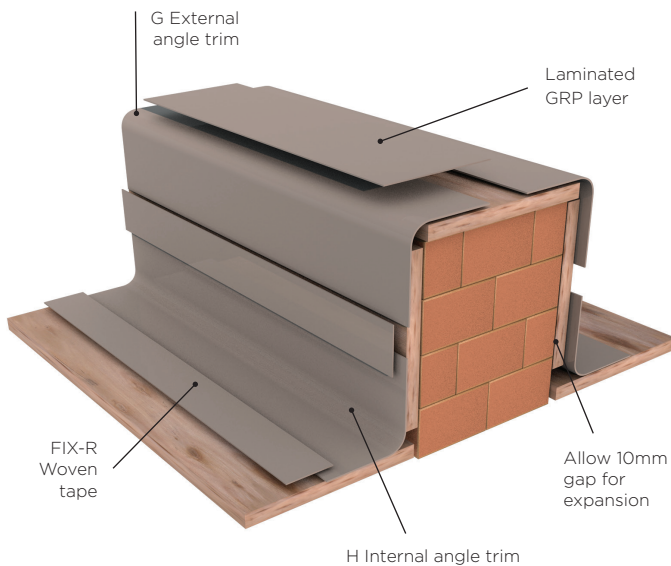
The F series flat flashing is used when a pitched roof meets a flat roof. Clout nails are used to fix the flashing to the deck.

Then form the shape at an angle to underneath the roof felt and tiles.

The F series flat flashing can also be used to form around vertical surfaces.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.



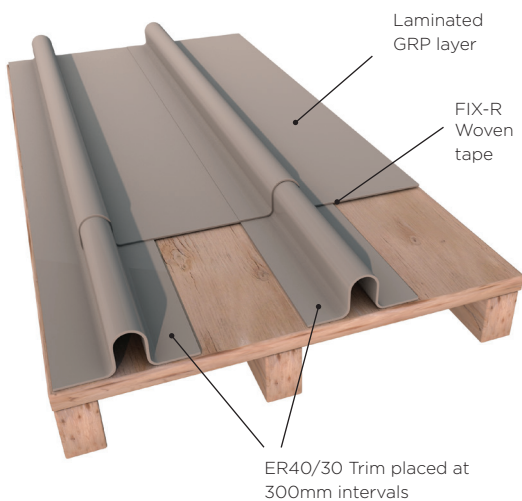
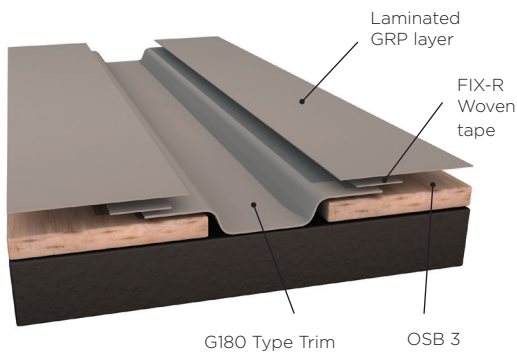
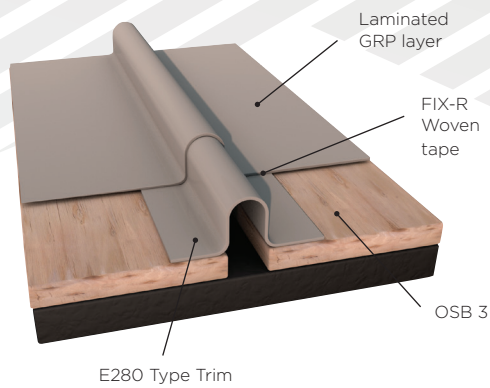
G150 & G275 90° External angled trims and H150 & H275 90° Internal angled trims in situ

The G & H series of trims are used to form over a parapet wall or similar features.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.



E280 & G180 Expansion joints in situ

Use either the E280 or G180 gully trim to form expansion joints on single formed areas over 50m². The appropriate width should be cut in the deck to accommodate the trim type used. Either can be used however the G180 gully trim gives the added benefit of channelling water for drainage. The E280 trim should be finished with a C5 closure.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.

ER40/30 Pre-Formed Rib detail in situ

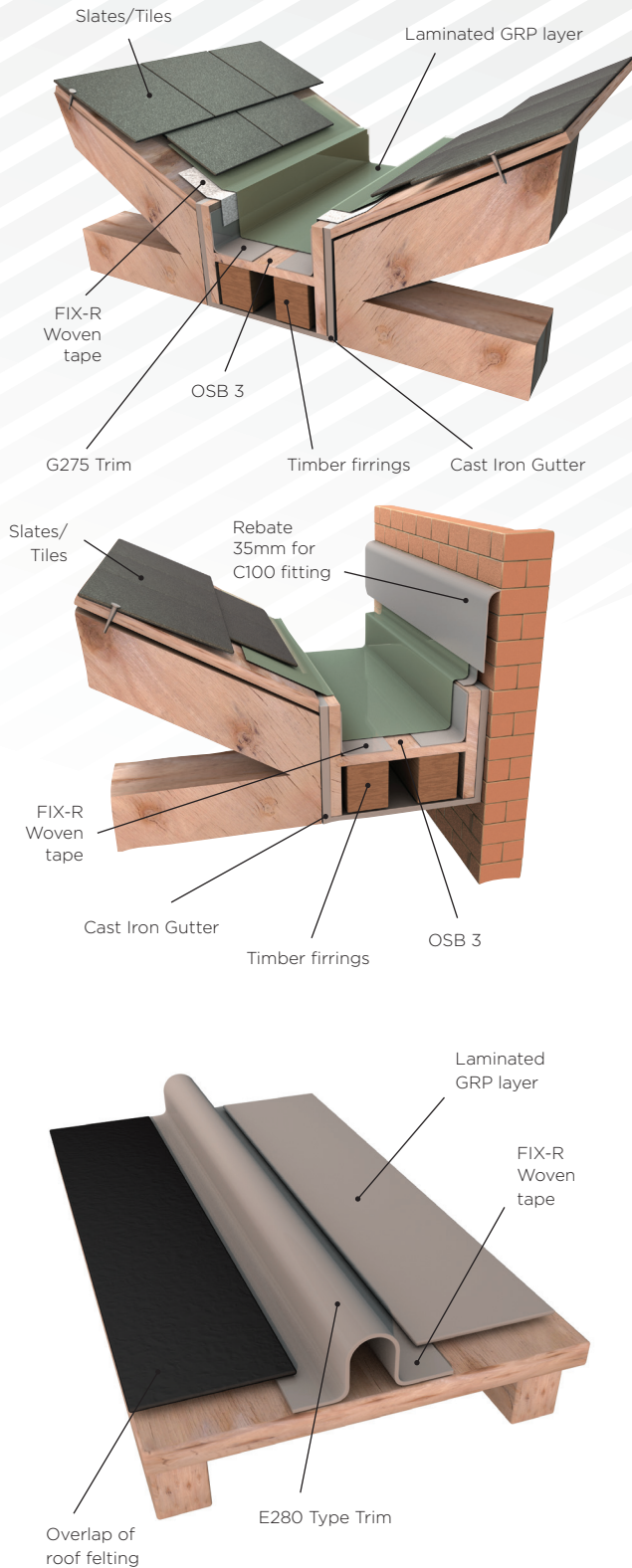
The ER40/30 trim is used to create the simulation of raised lead roll effect joints.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.

Use C6 closures to finish the ends.



Repairing box gutters between pitched and pitched/walled roofs

To raise the slates/tiles lay a OSB 3 the length of the roof and then use cut lengths into the box gutter supported by firrings to create a surface to form a sealed surface with the appropriate trims and laminated GRP.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.

E280 Pre-Formed Rib to form a joint to a felt roof in situ

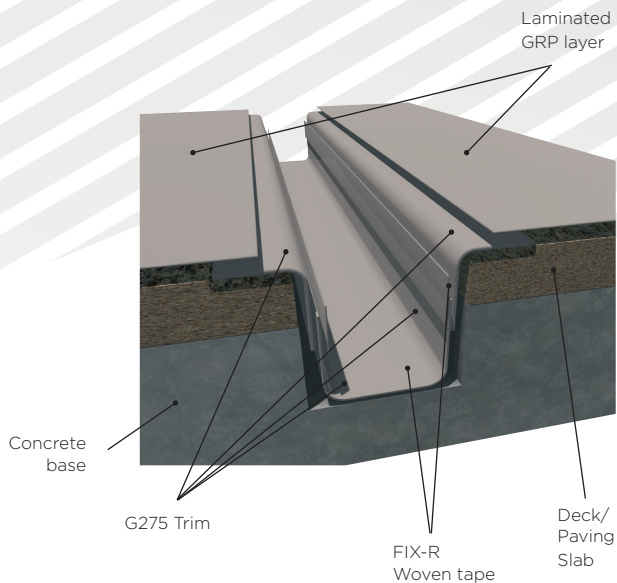
The E280 can be also used to form a joint between an existing felt roof and the GRP roof, by lifting the adjoining felt and bond the trim with Fix-All adhesive both to the felt and the deck, use an additional bead where the lip of the felt meets the trim to form a watertight seal.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.

Use C5 closures to finish the ends.

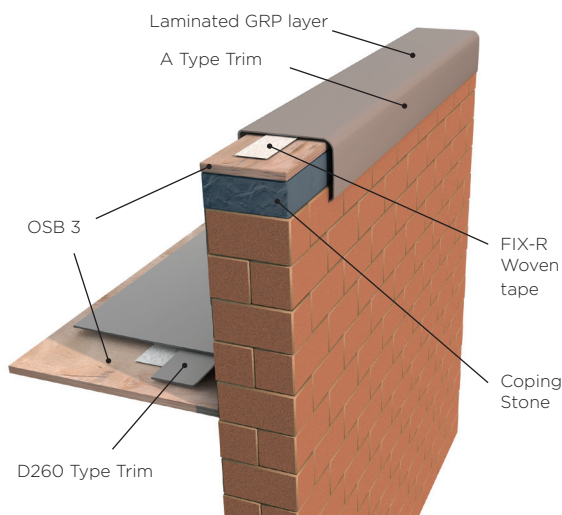


G275 Trim to form gulley detail in situ

Use the G275 to form the shoulders of the gutter and the base of the gulley, fix with nails if boarded and use Fix-All adhesive in both instances if bonding to concrete. Tape all joints to ensure a strong gulley.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.



Forming GRP over parapet wall with coping stone in situ

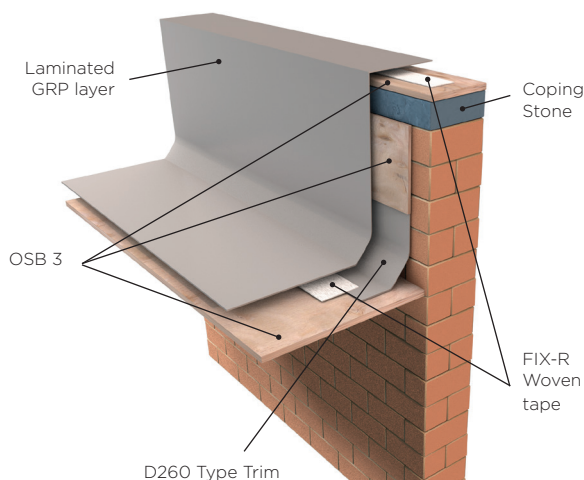
To ensure a fully sealed system is achieved when laying roofs with parapet walls it is strongly advised to form the GRP up the vertical of the wall over the coping stone and terminating in a A type drip trim

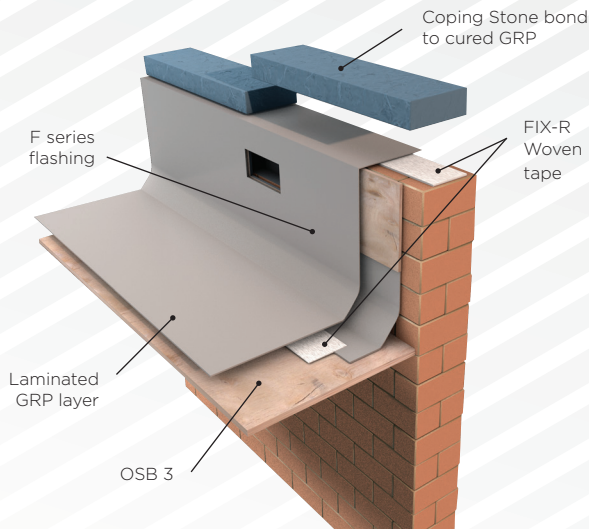
Lay the GRP in the normal manner using a D260 upstand then use the F series flashing up the wall and an A type drip trim to finish the drop on the back face of the parapet.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.





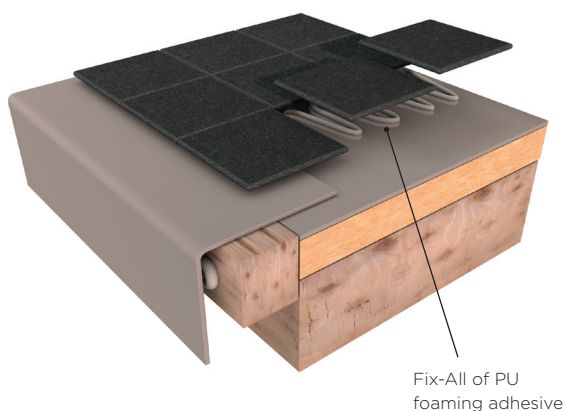
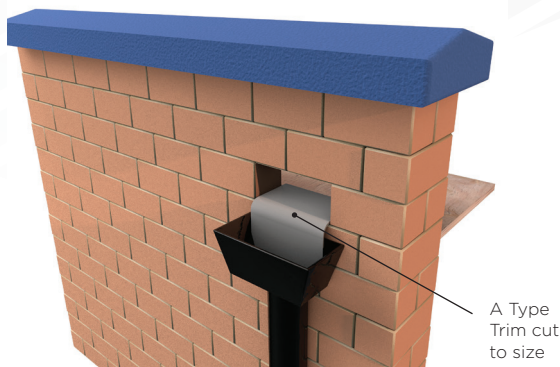
Forming GRP outlet through a parapet wall with coping stone

To form a lined outlet it is recommended that this is formed in conjunction with the trims being fixed. Lay the GRP in the normal manner using a D260 upstand then use the F series flashing up the wall and cut the F trim to form the outlet, trim an A type trim on the back face of the wall to create a fall to the gutter.

Clout nails should be used to fix the trim to the deck - do not nail the trim to the battens.

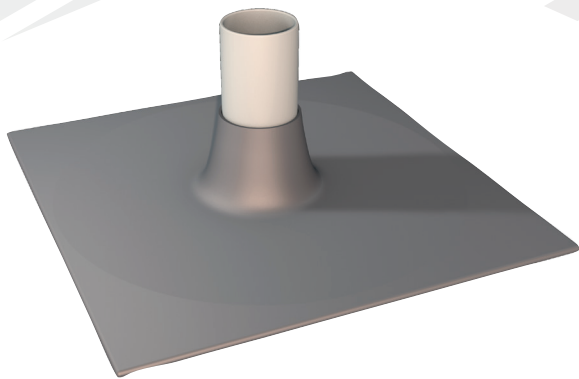
To create a continuous run overlap by 50mm the first trim with the next and bond with FIX All adhesive. Finish off by applying the FIX-R woven glass tape with catalysed FIX-R GRP resin.

Allow to go hard and then lightly sand before finishing with catalysed FIX-R Topcoat.



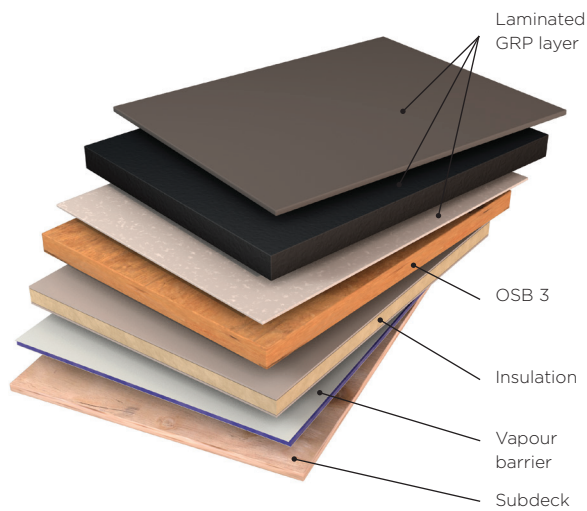
Laying rubber & promenade tiles

When laying tiles onto the formed GRP roof it is strongly recommended that this is done within a short time of the GRP curing to achieve the best bond, if this is done post installation then the GRP will need to be lightly abraded, wiped clean with FIX-R Acetone cleaner. Ensuring the surface is clean dry and free of debris proceed to lay the tiles using either Fix-All adhesive with a zig-zag pattern with a bead size of 8-10mm or an expanding PU Adhesive.



Forming GRP on UPVC pipe

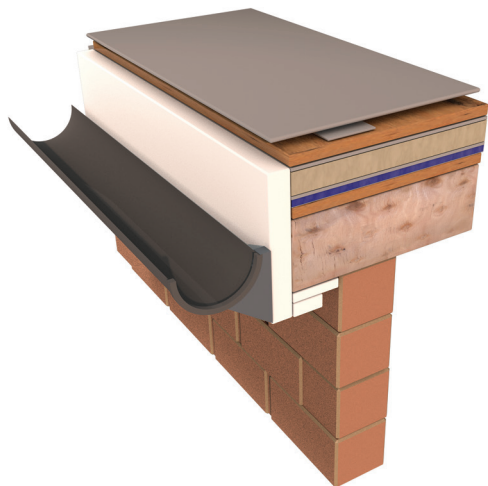
GRP can be formed around and into UPVC pipes by abrading the UPVC first, in addition any cementitious collars should be primed along with the UPVC using G4 sealer prior to forming the GRP around the pipe. To finish the pipe correctly it is recommend wrapping the uppermost part in the FIX-R woven tape and resin to form a neat collar, finish with topcoat in the normal manner.



Warm Roof construction in situ

Forming a warm roof with GRP is achieved by laying a sub deck on the joists with 300mm centres, a vapour barrier is laid next then the insulation layer, preferably use insulation with a built in vapour barrier.

Either mechanically fix the OSB 3 to the joists below or fully bond with an expanding PU adhesive. Then form the GRP roof in the normal manner.



FIXER

FLAT ROOFING

CATALYST ADDITION CHART

OSB 3/FIX-R GRP Resin Temperature	28-35°C	20-27°C	12-19°C	6-11°C	0-5°C
Percentage Catalyst	1% Standard Catalyst	2% Standard Catalyst	3% Standard Catalyst	2% Winter Catalyst	3% Winter Catalyst*
Weight of resin/topcoat	Weight or volume of catalyst (ml/g)				
1kg	10ml	20ml	30ml	20ml	10ml
2kg	20ml	40ml	60ml	40ml	60ml
3kg	30ml	60ml	90ml	60ml	90ml
4kg	40ml	80ml	120ml	80ml	120ml
5kg	50ml	100ml	150ml	100ml	150ml
6kg	60ml	120ml	180ml	120ml	180ml
7kg	70ml	140ml	210ml	140ml	210ml
8kg	80ml	160ml	240ml	160ml	240ml
9kg	90ml	180ml	270ml	180ml	270ml
10kg	100ml	200ml	300ml	200ml	300ml
11kg	110ml	220ml	330ml	220ml	330ml
12kg	120ml	240ml	360ml	240ml	360ml
13kg	130ml	260ml	390ml	260ml	390ml
14kg	140ml	280ml	420ml	280ml	420ml
15kg	150ml	300ml	450ml	300ml	450ml
16kg	160ml	320ml	480ml	320ml	480ml
17kg	170ml	340ml	510ml	340ml	510ml
18kg	180ml	360ml	540ml	360ml	540ml

*NB: Whilst FIX-R GRP can be used in cold/dry conditions any work should be completed and cured before nightfall or before temperatures fall sharply.

Do's & Don't's

- In hot weather never go below 1% addition of standard catalyst, if still curing too quickly then mix up less resin/topcoat.
- Never use more than 3% in cold weather as this can affect the performance of the system.
- Topcoat should not be laid in the height of the day in summer or late in the day in winter.
- The more resin/topcoat you mix the hotter it will get the longer you leave it in the mixing bucket.
- If material has gelled and cannot be used it should be moved to a safe location away from flammable materials.
- Always stir every mix thoroughly to ensure a streak free finish and fully cured finish.
- If in doubt - ask for advice.

MATERIALS USAGE GUIDE

Resin/Topcoat/CSM/Catalyst/Tape/Boards & Glue.

Materials Usage Guide (NB guide does not account for any materials lost in mixing, dispensing or cutting).

Roof Size (M ²)	FIX-R GRP Resin 450g Chopped Strand Mat & 600g Chopped Strand Mat	FIX-R GRP Topcoat	CSM (450g Chopped Strand Mat - 20 year Guarantee)	CSM (600g Chopped Strand Mat - 25 year Guarantee)	Catalyst ml (Based on 2% addition) 450g Chopped Strand Mat & 600g Chopped Strand Mat	Woven Glass Tape (Recommended 75mm x 50M)	OSB 3 Boards (2400 x 1200mm x 18mm)	Fix-All Trim Adhesive
5	6.25kg (450g) - 7.5kg (600g)	3.75kg	2.25kg	3kg	200ml (450g) - 225ml (600g)	1	2	1
10	12.50kg (450g) - 15kg (600g)	7.5kg	4.5kg	6kg	400ml (450g) - 450ml (600g)	1	4	1
15	18.75kg (450g) - 22.5kg (600g)	11.25kg	6.75kg	9kg	600ml (450g) - 675ml (600g)	1	6	1
20	25kg (450g) - 30kg (600g)	15kg	9kg	12kg	800ml (450g) - 900ml (600g)	1	7	2
25	31.25kg (450g) - 37.5kg (600g)	18.75kg	11.25kg	15kg	1000ml (450g) - 1125ml (600g)	1	9	2
30	37.5kg (450g) - 45kg (600g)	22.5kg	13.5kg	18kg	1200ml (450g) - 1350ml (600g)	1	11	2
35	43.75kg (450g) - 52.5kg (600g)	26.25kg	15.75kg	21kg	1400ml (450g) - 1575ml (600g)	1	13	3
40	50kg (450g) - 60kg (600g)	30kg	18kg	24kg	1600ml (450g) - 1800ml (600g)	2	14	3
45	56.25kg (450g) - 67.5kg (600g)	33.75kg	20.25kg	27kg	1800ml (450g) - 2025ml (600g)	2	16	3
50	62.50kg (450g) - 75kg (600g)	37.5kg	22.5kg	30kg	2000ml (450g) - 2250ml (600g)	2	18	4
60	68.75kg (450g) - 82.50kg (600g)	45kg	27kg	36kg	2400ml (450g) - 2700ml (600g)	2	21	4
65	75kg (450g) - 90kg (600g)	48.75kg	29.25kg	39kg	2600ml (450g) - 2925ml (600g)	2	23	5
70	81.25kg (450g) - 97.5kg (600g)	52.5kg	31.5kg	42kg	2800ml (450g) - 3150ml (600g)	2	25	5
75	87.5kg (450g) - 105kg (600g)	56.25kg	33.75kg	45kg	3000ml (450g) - 3375ml (600g)	2	27	5
80	93.75kg (450g) - 112.50kg (600g)	60kg	36kg	48kg	3200ml (450g) - 3600ml (600g)	3	28	6
85	100kg (450g) - 120kg (600g)	63.75kg	38.25kg	51kg	3400ml (450g) - 3825ml (600g)	3	30	6
90	106.25kg (450g) - 127.5kg (600g)	67.50kg	40.5kg	54kg	3600ml (450g) - 4050ml (600g)	3	32	6
95	112.50kg (450g) - 135kg (600g)	71.25kg	42.75kg	57kg	3800ml (450g) - 4275g (600g)	3	33	7
100	118.75kg (450g) - 142.5kg (600g)	75kg	45kg	60kg	4000ml (450g) - 4500g (600g)	3	35	7



FLAT ROOFING

MATERIALS USAGE GUIDE

Rollers/Tools/Brushes/Buckets/Acetone.

Roof Size (M ²)	3" Resin Roller (18mm Fluffy)	3" Topcoat Roller (4mm Short pile)	6" or 9" Resin Roller (18mm Fluffy)	Topcoat Roller (4mm Short pile)	6" or 9" Paddle/Fin Roller	Small Paddle/Fin Roller	Large Small Brush	Large Brush	Small Bucket	Large Bucket	Catalyst Measure/Dispenser	Acetone Cleaner
5	1	1	1	1	1	1	1	2	1	2	1	5ltrs
10	1	1	2	2	1	1	1	2	1	2	1	5ltrs
20	2	2	3	2	1	1	2	2	1	2	1	5ltrs
30	2	2	3	2	1	1	2	4	1	2	1	5ltrs
40	2	2	3	2	1	1	2	4	1	2	1	5ltrs
60	3	3	4	3	1	1	4	6	2	3	1	5ltrs
80	3	3	4	3	1	1	4	6	2	4	1	10ltrs
100	4	4	6	4	2	2	5	8	2	5	1	10ltrs
150	5	5	8	5	2	2	6	10	3	6	1	10ltrs
200	6	5	10	8	2	3	6	10	4	8	1	10ltrs

Frequently Asked Questions

Once installed FIX-R GRP system will remain watertight and look great for many years. The following Q&A's look to answer some of common questions and highlight potential installation pitfalls to avoid.

1. Does the weather/temperature affect FIX-R GRP when installing?

- Yes the temperature and weather are main reasons that GRP roof installations fail, so follow these steps to avoid problems.
- Always check local weather forecast.
- In the summer avoid using product above 35°C and in winter below 5°C check the temperature of the deck and materials with an infrared thermometer if unsure.
- Keep materials at an ambient temperature and avoid either leaving outside in cold/sun before commencing work (ideally around 15°C for best performance).
- In either winter or summer avoid mixing big amounts of resin/topcoat in one go, ideally 5-10kg max. This will give you the time to work with product and avoid having to rush the finish and waste materials.
- Always avoid the boards from getting wet, NEVER lay onto wet/damp boards, if it rains whilst applying always cover.
- Don't apply the topcoat at height of day in direct sunlight and avoid applying winter after 3pm as it will take longer to cure as it gets colder and potentially remain tacky.

2. The GRP layer looks milky white

- This is caused by water and has affected the product hardening properly, cut away the affected area and sand edges, wipe with acetone and overlay the Chopped Strand Mat with an overlap of around 75mm onto unaffected area fresh resin/CSM.

3. The topcoat is staying tacky and not going hard or I have streaks of soft topcoat?

- It is essential you always add Catalyst to every mix, get into a routine of double checking that you've added the catalyst and mixed it thoroughly, most issues are due to incorrect addition or forgetting to add it before applying. Never confuse Acetone cleaner for catalyst.

4. The resin/topcoat has gelled or hardened in the bucket before I could use it?

- This is a common problem if either adding too much catalyst and not changing it to suit the temperature or you have mixed too much in one go, the more you mix the hotter it gets if left in the bucket. Never mix a full keg.

5. There are white fibres of the chopped strand mat showing?

- This is due to not applying the correct amount of resin and 'wetting' out the CSM, always ensure that all fibres are coated with resin and consolidated with the paddle or fin roller before laying the next row.

6. There are windows, vehicles or vegetation close to the roof, what should I do?

- Try to cover any area that may be affected by spills, splashes or drips with polythene sheeting or similar, when using the paddle/fin roller vigorously this can lead to resin spray that can go beyond the perimeter of the roof. Work the roller steadily and systematically to avoid this and if you do get liquid resin on surfaces it can be wiped clean with a clean cloth with a small amount of acetone on. Hardened resin/topcoat will bond to a lot of surfaces and will require mechanical removal, so this is best avoided.

7. The topcoat is coming away from the resin layer or cracking?

- Normally this occurs if the topcoat has been laid on a wet surface or too thickly. You should remove any loose topcoat, abrade, acetone wipe and then reapply topcoat in the affected area to the recommended thickness of between 0.5 - 0.6mm taking care not to overcoat the surrounding area too much.

8. The customer is complaining of a cracking noises or sharp/sudden bangs

- Due to the nature of GRP it will expand/contract with the hot and cold weather as well as the OSB 3 boards and as such if the OSB 3 hasn't been fitted with the correct expansion gaps or boards butted up or no expansion joint above 50m² this will give rise to these noises. Whilst this may not lead to the roof failing it can often be the source of ongoing complaints from the customer.

9. There is standing water/ponding on the roof?

- The roof has either not been fitted with adequate fall to allow for drainage or the boards have been laid incorrectly, ponding doesn't affect the performance of the roof but can be unsightly and should be avoided.

FIX-R

FLAT ROOFING

GRP

- 20 & 25 Year Material Guarantee's on system*
- Materials specially developed and designed for roofing
- Superior 'wet-out' of resin with fibreglass reinforcement
- High grab and final bond strength
- UV resistant topcoats with ease of application
- Tough and weather resistant finish
- Long term performance with use in areas such as extensions, garage roofs, balconies and walkways

*Please see full guarantee's for conditions.

All the information in this product sheet is based on practical experience and is published in good faith. However, because we have no control over the manner or conditions in which our products are used, or over work undertaken or end product manufactured by the purchaser, we cannot accept liability for results. Responsibility for ascertaining the suitability of products for their purposes rests with the purchaser. All conditions, representations, statements, warranties or guarantees whatsoever, whether express, implied or statutory, in respect of any goods manufactured, sold or supplied by us are hereby expressly excluded and we accept no liability in respect of any claim for damage or consequential loss caused to any property arising directly or indirectly out of the use of our products or goods. FIX-R reserves the right to change product specifications without notice. VERS 2. 02/2019