



# PROGRP

ADVANCED GLASSFIBRE ROOFING SYSTEM

## INSTALLATION GUIDE



**HEAT  
RESISTANT**



**STORM  
PROOF**



**FROST  
PROOF**



**FIRE  
RESISTANT**



**FOOT  
TRAFFIC**

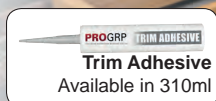
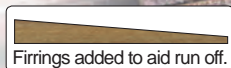
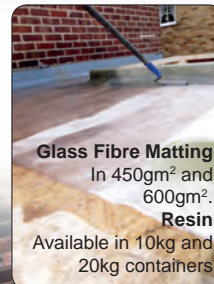


**IMPACT  
RESISTANT**

# SECTION 1: WELCOME TO PROGRP

ProGRP is a new advanced liquid applied GRP – Glass Reinforced Polyester- flat roof system. It has been specifically engineered for flat roof applications in the UK market. It is a fully integrated seamless system where all the components are designed to work together to ensure that you can take full advantage of this rapidly expanding market. ProGRP can be used on virtually all types of flat

roofs up to and including vertical surfaces for example the cheeks of a dormer or the inside face of a mansard or parapet roof. We have extensive experience using GRP to solve the problems often associated with failed leaking bitumen felt roofs and we are here to help you. We offer full training for you and your staff at the distributor's depot. Ask your distributor for more details and cost.



## DESCRIPTION AND SPECIFICATION

A ProGRP roof is a wet laid, single ply GRP laminate made up of two layers of catalysed resin sandwiching a layer of chopped strand glass fibre mat (450/600gsm). It is applied to a new OSB T&G3 board. Profiled GRP edge trims are applied to the roof edges and abutments and the roof is finished with a coat of catalysed pigmented top coat.

## SYSTEM FEATURES

- All ProGRP components are engineered to be used together.
- Range of profiled edge trims to suit all applications.
- 25 year materials warranty.
- Low styrene emission resins.
- UV resistant.
- The ProGRP laminate is fully resistant to wind uplift
- Anti slip resistant finish available
- Fire retardant (BS476 PART3 EXT.FAB)

## TRAINING

Merchant site training is available. See your distributor or ProGRP website for details. Training is always recommended before installing a ProGRP roof.

## RESISTANCE TO FOOT TRAFFIC

ProGRP is available with two grades of chop strand matting (CSM). 450gsm CSM for areas of occasional foot traffic. 600gsm CSM for areas of heavy foot traffic or load bearing (decking, promenade tiles, green roofs) in conjunction with a slip resistant finish.



# SECTION 1: COMPONENTS & APPLICATION TOOLS

## PRIMARY COMPONENTS

**RESIN** 10kg & 20kg cans

**TOP COAT RESIN** 10kg & 20kg cans

**LIQUID CATALYST (hardener)** 1kg and 5 kg containers

**CHOPPED STRAND MATTING** 450gsm/600gsm

**GRP EDGE TRIMS** Pre-formed in 3m lengths

See ProGRP "Edge Trim section" for profiles, sizes and usage illustrations



## ANCILLARY COMPONENTS

**ACETONE** For bucket and laminating roller cleaning plus roof preparation.

**TRIM ADHESIVE** For ensuring correct fixing of trims.

**75mm WIDE CHOPPED STRAND BANDAGE**

For joining trims to roof.

**100mm TISSUE** For ensuring neat finish on visible moulded corners or tidying up details such as roof penetrations.

**G4 POLYURETHANE PRIMER** For priming a concrete, brick or metal surfaces to accept ProGRP laminate.

**ANTI SLIP SURFACE** For adding to surface of topcoated roof to create a 'mineral' and slip resistant finish.



## APPLICATION TOOLS

**APPLICATION ROLLERS** (frame and sleeve) 3", 7" and 9" wide for applying resin and topcoat resins (replacements sleeves available)

**LAMINATING ROLLERS (bubble busters)** 3", 7" and 9" ribbed metal rollers for consolidating and distributing resin into CSM to ensure an even and correct resin to mat ratio (3 to 1) and to remove any air bubbles from the laminate.

**CATALYST SAFETY DISPENSER** For measuring and dispensing the correct quantities of Catalyst (see Catalyst guide)

**LAMINATING BRUSHES** 1", 2" and 4" wide for application of resin and moulding to shape in difficult to access areas. Also useful for topcoating detailing such as bottom lip of trims.

**MIXING BUCKETS** For measuring resin and topcoat resins, mixing in Catalyst and transferring to roof surface.

**Disposable latex glove** To protect hands when applying resins.



## OTHER MATERIALS

**Not supplied as part of the ProGRP GRP system.**

**TREATED TILE BATTENS** 19mm x 38mm for giving rigidity to edge trims

**OSB DECKING BOARDS** 2400x600x18mm tongue and groove

**FIXINGS FOR DECKING BOARDS** Either ring shank nails, sheradised or plated woodscrews (minimum 65mm)

**20MM GALVANISED RING SHANK NAILS** For fixing trims



## HEALTH AND SAFETY - MATERIALS HANDLING

When mixing/applying ProGRP resins we recommend the use of:

- Hand protection (latex gloves)
- Respiratory protection (dust mask)
- Eye protection (protective goggles/glasses) Additionally, we recommend that eyewash liquid (saline solution) is available in the event that resin splashes into eyes.

If resin splashes in the eyes, irrigate thoroughly with eyewash liquid or fresh water and consult a medical professional if irritation persists.



## SECTION 2: PREPARING AND LAYING THE DECK

### WEATHER NOTE!

Before opening a customer's roof to the elements always check the weather forecast. If rain is forecast before you are likely to finish the job it may be wise to wait for a more suitable opportunity. Consult with your customer. On larger roofs only stripping and decking small areas which can be waterproofed or protected prior to bad weather.

If the existing substrate is unsuitable for laying your decking boards onto, it should be removed to expose the roof joists. Check that the joists are free from rot, replace those that are affected and also check that adequate falls are provided for the roof to drain. This may require fitting shaped furring strips to the joists to provide a fall. Building regulations call for a minimum fall of 1:60. If no fall is provided ponding "will" result which the customer will consider unacceptable.

### COLD ROOF CONSTRUCTION

A cold roof is where the insulation is laid between the joists and supported by the ceiling. A 50mm gap should be left from the top of the insulation to the underside of the decking for ventilation. Prior to laying your decking boards, ensure that they are dry. ProGRP like most waterproofing systems will not bond to wet or damp boards, leading to almost certain delamination in the future. Ventilation of this type of roof construction is very important to prevent condensation.

#### The advantages of choosing OSB decking are:

- They are easier to handle and carry up onto the roof because they are 2400 x 600 x 18mm and therefore lighter than full size boards.
- They are designed to minimise the effects of expansion and contraction.
- T&G joints mean board joints need not occur on a joist, thus reducing wastage.
- T&G joints mean no bandaging required for T&G board joints.

#### Laying the deck

Using 2400x600x18mm OSB Smartply T&G boards lay them at 90° to the joists, laid with the writing side up. This will ensure that when resin is applied the joints will fill with resin to help bond the boards together. Begin laying the boards at the furthest edge from the draining edge. Where the board is laid along a wall, an expansion gap of 25mm between board and wall should be allowed.

#### Commence decking

Square off the short edge of the board with the fascia and laying the boards end to end until they reach the opposite edge. Trim the last board to fit and use the off cut (if it is larger than 400mm) to begin the next row, thus creating staggered joints. Ensure that the tongue/grooves of each board are correctly engaged. Proceed in this manner, cutting and shaping where necessary until the roof is fully decked. For roofs over 50 sq. metres see note on Expansion joints. Decking fixed to support joists Decking laid – writing facing up.

When laminated, the roof surface will reflect imperfections in the deck. The recommended methods of fixing are either: Gas powered nail gun using 65mm sheradised ring shank nails, or screw gun using plated/passivated woodscrews min 65mm. Fixings should be inserted at 200mm spacing (4 fixings across 600mm width) on every joist.



### WARM ROOF CONSTRUCTION

Because of the complexities and variations of rules and regulations in relation to this we advise visiting the insulation manufacturers relevant websites.

Shown below is a typical warm roof installation:



#### NOTE.

! When using firrings, the deck will obviously have a 'fall' to the lowest edge. If that fall runs parallel to the front edge, when your trim is in place along that front edge, it will follow the same 'fall' as the roof. This may not look attractive when viewed from the ground, especially if the front edge of the roof is on the front elevation or rear elevation of a property. To level up the trim, use a firring the same size as used on the joists but place it on top of the deck, along the front edge, falling the opposite way to the roof and position your trim on top of it. This will have the effect of straightening the trim and making it level. Reverse firring to level front and rear elevations.

#### APPLICATION INSTRUCTION - PARAPET WALLS

Parapet walls can be encapsulated into the ProGRP system to remove them from future maintenance. The parapet can be encapsulated by cladding the top of the parapet and inside face with decking board and using a combination of trims. The D260 angle fillet trim should be used on the inside face, the AT195 external angle trim on the top inside corner and the A200/A250 drip edge trim on the outer corner. All trims should be nailed into position and bandaged. Trim joints will need to have PU trim adhesive applied as will the application of the trim to the timber batten on the outside face. All trim joints will need to be bandaged. The top surface of the parapet can have coping stones fitted for a conventional appearance. It is recommended that dry sand be sprinkled into the final layer of resin to provide a finish to allow the mortar to key to.





# SECTION 3: TRIM INSTALLATION

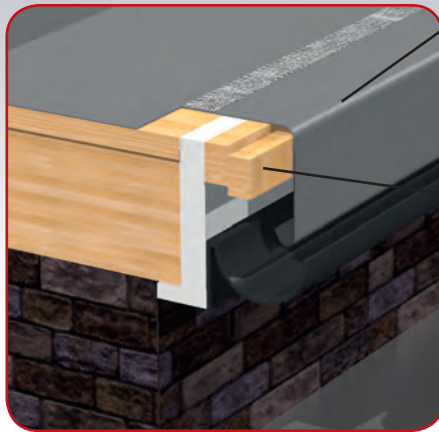
Edge trims are manufactured in GRP and are 100% compatible with ProGRP roofing resins and topcoat. Always bond to the side with the matt finish, where applicable, any laminate applied direct to glossy side will delaminate.

## FIXING

Trims are fixed in place using 20mm ring shank nails. First, battens (19mm x 38mm treated) should be fixed around the roof perimeter in a position suitable for each trim profile and prior to fixing the trim in place, short beads of Cromar P U trim adhesive approximately 30mm at 300mm centres should be applied to the battens. The trim can now be positioned and bedded into place to ensure the face is vertical and that the adhesive makes good contact. Mechanically fixing using ring shank nails can now take place.

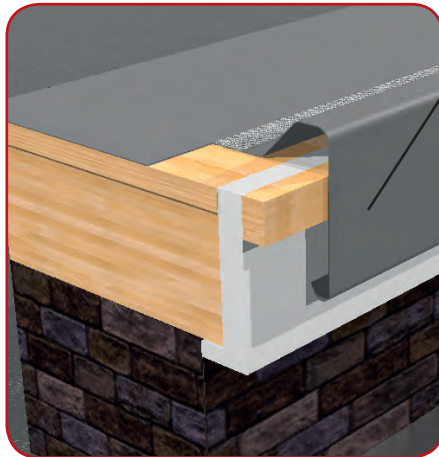
When using the drip edge trims (A200 and A250) it may be necessary to double batten' to ensure the bottom edge of the trim is located as close to the centre of the gutter as possible.

Where trims are overlapped onto one another, the join needs to be sealed using a continuous bead of trim adhesive. In addition, all trim joins should be bandaged. Where trims meet at corners, whether it be the same profile or two differing profiles, the join can be made by cutting/mitre and moulding a corner, using chop strand mat and catalysed basecoat. If you are using pre-made corners, always remember that any trim-to-trim join needs the overlap sealing with trim adhesive and then bandaging. For a complete listing of trim profiles see 'ProGRP "Edge Trim Section"'.  
All trim overlaps should be sealed with Cromar PU trim adhesive and bandaged into place.



**A170/A200/A250 - Drip edge trims** Drip edge trims are fitted to the lowest edge of the roof where the rainwater flows into the gutter. To ensure the vertical leg of the trim sits into the centre of the gutter, the trim needs to be packed out by using two support battens, the first fixed just below the level of the deck and the second 10mm below the first, to allow the trim to sit flush with the roof.

**Double batten to centre drip trim over gutter.** Before offering the trim into place, apply beads of Cromar PU trim adhesive approx. 30mm long at 300mm centres to the batten. The trim can now be bedded into place and the flange ring shank nailed to the deck. For low pitched roofs, the profile of the trim may cause rainwater to 'pond' slightly at the front edge. To avoid this, plane approximately 2mm off the leading edge of the deck the width of the trim flange so the trim can be 'recessed' into the front edge and lay completely flush with the roof. All trim overlaps should be sealed with Cromar PU trim adhesive and bandaged.



**B230/B260/B300 - Upstand (raised edge) trims** Upstand trims are placed on the non-draining open edges of a roof, overlapping onto the fascia boards. A single batten should be fixed on the outside of the fascia board level with the top edge of the deck. Cromar PU trim adhesive should be applied to the battens in 30mm beads at 300mm centres before bedding the trim.



### D260 - Angle Fillet Trim

This trim is for use against an abutting wall or parapet. Place the trim against the wall making sure it sits squarely. Fix in place to decking NOT the wall using ring shank nails, at 150-200mm centres. Where the angle fillet trim needs to be joined by overlapping, use a bead of PU trim adhesive across the full width of the trim. For a cleaner line a "soaker" can be used. The whole join should then be bandaged, sealing both trims together. If the roof is to be left overnight without a flashing trim in place a bead of PU adhesive sealing the top edge of the angle fillet to the wall will help seal an otherwise open point, the main flat area of the roof being covered with a tarpaulin.

### C100 - Simulated lead flashing

Used with D260 angle fillet trim as a replacement to lead, it is cut into brickwork/stonework. Cut a chase into the brickwork mortar joint with an angle

grinder and insert the flashing trim into chase having first applied a continuous bead of PU trim adhesive to its rear side. This will bond the flashing trim to the angle fillet, eliminating any possibility of water ingress. Press firmly into chase, overlapping the angle fillet trim and neatly point with Cromar PU adhesive. Uneven stone walls – random or otherwise may benefit from a conventional lead flashing or a backboard can be constructed enabling the use of an angle trim to replace the C100.



### F300 - Flat flashing

Mainly used on the weather board underneath slates or tiles where a pitched roof meets the flat roof. The main flat roof laminate should be extended to cover the nailed section of the flat flashing affixed to the decking on the flat roof but need not be extended up the pitched roof section. Additionally, the pitched roof section should not be fixed but allowed to 'float' thus allowing for expansion movement.

In some circumstances a thin support sheet of ply under the flat flashing on the pitched section may be appropriate dependant on the centres of the existing roof rafters.

## ADDITIONAL TRIMS AND CORNERS AVAILABLE:

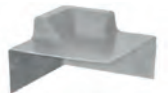
### Internal and External angle INT 195 / EXT 195



### Expansion Joint E280



### C1 Universal External Corner



### C2 Fillet to trim

### C3 Internal & External fillet corner

### C4 Universal Internal Corner

### C5 Large roof ridge closure

### C6 Small roof ridge closure

# SECTION 4: APPLICATION OF PROGRP SYSTEM

## Overview: Resin

ProGRP Resin is supplied in 10kg or 20kg cans which equates to approximately 6.5 OR 13 M<sup>2</sup>. The correct ratio of resin to glass fibre chop strand mat (450gsm) is 1.5 litres of resin per m<sup>2</sup> of mat. For 600gsm mat your resin usage will be approximately 33% higher – the thicker the mat the more resin usage.



**WEATHER NOTE!**  
DO NOT LAMINATE IN WET/DAMP OR VERY COLD CONDITIONS.

## LAMINATING PROCEDURE SUMMARY

1. Ensure all debris, tools etc. are removed from the roof and the roof is swept clean and obviously is completely dry.
2. Cut the matting mat for detailing work.
3. Prepare bandage for sealing all trims to new roof deck.
4. Roll out and cut mat for the whole roof surface (remembering 50mm overlap)
5. Roll up strips of mat and place together. Lay out first strip of mat along highest point continue overlapping each strip by 50 mm
6. Prepare tools, i.e. application rollers (3" + 7") metal laminating rollers (3" + 7") laminating brushes, mixing buckets.
7. Select an area on the ground, adjacent to the ladder for mixing. Protect the mixing area from spills or splashes using either an off cut of decking or a plastic sheet.
8. Mix a small batch (1-2 litres) for detailing and bandaging. This is an ideal opportunity for assessing the quantity of catalyst you are using and whether you need a longer working time (less catalyst) or shorter working time (more catalyst)
9. Mix and apply resin and chop strand mat for roof area to be laminated.
10. When cured, sand down prior to topcoating.
11. Topcoat.



Make sure the laminating roller is used in a controlled fashion (slower) so as not to generate spray.

To soften the detailing on corners and drip overlaps use 'tissue'. Tear off a length and apply immediately after shaping the glass fibre bandage to the trim and work in with brush or roller. Try not to use too many layers, one should suffice, we don't want to 'build up' the corner profile and make it more visible.



## LAMINATING THE MAIN ROOF AREA

Beginning at the highest edge of the roof, apply the catalysed resin to 1m<sup>2</sup> of roof. (To achieve the correct ratio of resin to CSM, approximately 1/3 needs to be applied to the deck and 2/3 on to the mat).

Lay the leading edge of one of the strips of mat you cut earlier into the resin and unroll the first square metre. Impregnate the mat you have unrolled before continuing to repeat the process along the length of the strip of mat.

When laminating the main roof area, never mix more than 10litre at a time, even less in warm weather. This will ensure that you DO NOT risk the basecoat resin going 'off' in the bucket and becoming unusable.



## LAMINATING: DETAILING AND BANDAGING

For corners, cut a piece of mat, either from the roll or from off cuts generated, approximately 300mm square. Lay it on a smooth slate or glass panel adjacent to where it is to be used and 'wet out' with catalysed resin on both sides, using a 3" soft application roller. Peel away from the slate and drape the wetted mat into position on the corner/detail, making sure the bottom edge is approximately level with the bottom radius of the trim. Fold around the corner and over the top of trim and down onto the deck. Using the 3" application roller or a laminating brush, the mat can now be worked into the contours of the trim until you are satisfied with the shape.

When detailing, corners etc, it is always possible to go back to the corner when installing the main laminate applying a little extra resin if any pin holing is noticed especially over any voids. Uneven edges, can be trimmed with a safety knife prior to sanding.

## TRIMS - BANDAGING

Where the trims meet the deck 75mm bandage can be applied. Bandage is supplied in rolls approximately 73m long and can be applied directly from the roll. Dip the 3" application roller into the catalysed resin and run it down the trim/deck joint, half on the trim and half on the deck approximately 1 metre at a time. Unroll the bandage into the resin and then repeat the process until that 'run' of trim has bandage in place. Return to the start and impregnate the bandage with a further coat of resin. Once again, when complete, return to the start and using the laminating roller (3") consolidate and distribute the resin through the bandage using light pressure until the bandage is transparent (wet out). Any white areas will need further resin adding.

Always ensure the bandage covers the nail heads on the trims and check that where the trim edge meets the deck there is no pin holing due to lack of resin. When changing direction, tear the bandage and overlap it but not until the first bandage is wet out. Never apply 'dry on dry'. Any joins in the trims should be bandaged in the same way.

When using the laminating rollers, it is possible to generate a 'spray' of resin if used too vigorously. The slower the roller turns equals less spray. On a windy day, this spray can be carried significant distances so care needs to be taken. 'Spray' can usually be removed from glass and window frames but not from cars!

## CONSOLIDATING

After the first 2m

of mat has been laid and impregnated, the laminating roller (bubble buster) is used to evenly distribute the resin across the mat and help move any air pockets. Using the laminating roller, apply light pressure to the wetted mat using long even strokes, making sure that the whole area of the mat is worked until transparent. Any area that is white or opaque will require more resin applied. Continue until the whole flat area of the roof is laminated and consolidated. The mat is properly 'wetted out' when it appears almost transparent i.e. you can clearly see the decking below. Remember to work towards an area where you can get off the roof.

Repeat this process until the whole roof is laminated.

*Each strip of chop strand mat ideally requires a 50mm overlap to the next. Always overlap with the 'feathered' edge as this will make the joins appear less pronounced.*

When laminate is complete and cured, inspect for 'pinholes', If found, apply a further light coat of catalysed resin to the affected areas.

To make overlapped areas less prominent tear matting, this produces a feathered edge which softens the joins.

Always mix the resins on a clean area, a sheet or a board adjacent to the ladder. When leaving the roof always inspect the soles of your boots To avoid resin being 'walked' onto your customers' property.

When adding catalyst to resin, always mix well to ensure even distribution.

One minutes stirring is recommended.

Never mix too large a quantity. You can always mix more – you can never put it back if you have mixed too much.

Catalyst addition at first seems complicated but it is easier than it seems, you will soon get a 'feel' for correct catalyst/resin combination.



## SECTION 5: APPLICATION OF TOPCOAT

ProGRP Topcoat (colour coat) is supplied in 10kg and 20kg cans giving you flexibility and reducing wastage. All cans must be thoroughly shaken/stirred before use and if separate cans are being used mixed together to avoid any possibility of colour variations between batches. Please refer to the Cromar catalyst addition chart.



### PREPARATION FOR TOPCOATING

Before applying ProGRP Topcoat it will be necessary to lightly sand the whole of the roof surface, corners and details. A smooth, unblemished surface will produce a high quality finish when topcoated.

After the roof has been sanded an Acetone wipe will greatly aid the adhesion of the final topcoat.

Using a sanding pad or sandpaper (40-60 grit) lightly sand the corners, taking care not to create 'holes'. Any unsightly fibres can be trimmed off using a safety knife. If a hole in the laminate is found this should be filled with catalysed resin before proceeding.

If the roof requires the use of C100 cover flashing trims, these should be fitted prior to topcoating the main area and after you have cut in with topcoat, sealing in place using cromar trim adhesive. Remember to include a bead of PU adhesive between the angle fillet and inside of the flashing trim

### TIMING

Always aim to apply topcoat immediately the roof can be walked upon after laminating.

**BEFORE TOPCOATING, SHAKE AND STIR THE CAN WELL!** As settling of the contents may occur.

### TOPCOATING THE EDGE TRIMS

Catalyse a small quantity of topcoat (1 – 2 KG/Litres) and apply to all the edge trims and approximately 100mm onto the roof.

To protect the fascia boards when applying topcoat to the trims, it may be necessary to slide an off cut of flashing or angle fillet trim between the trim and fascia to protect the fascia.

If necessary, use a brush to apply topcoat to the radius at the bottom of the trim. It may be necessary to do this either from the ground or from a ladder.

It is advisable to work back from the cover flashing, this will mean cutting in the flashing with topcoat, fitting the cover flashing and then continue to work back from here. **DO NOT** apply topcoat to the flashing trim as these are already 'pre-finished' with a UV stable covering.

The edge trims are the most visible often seen area of the entire roof.

Take extra care to make sure that they look as good as possible, tidy corners neat mitres. Your customer will judge the standard of the entire roof by the presentation of the parts most often seen.

### TOPCOATING THE ROOF

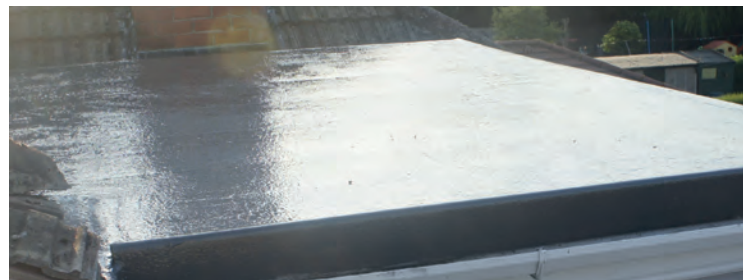
Calculate the amount of topcoat required, measure out into a bucket and add Catalyst to each batch of topcoat as you need it. Stir well for at least 1minute. To calculate the amount of topcoat required see the ready reckoner supplied by Cromar. Apply to the roof surface starting at the furthest point from the exit point on the roof and using the relevant sized soft application roller. The coat applied should allow the fibre pattern of the laminate to still be visible after application. If applied too thickly, the topcoat may crack over a period of time. Using long smooth strokes, apply the topcoat to the laminated roof surface, finishing at the point of exit.

If a non-slip finish is requested a grit or slate chip pings can be sprinkled onto the topcoat. This needs to be added by hand or a dispensing applicator as the roof is topcoated. It can be left uncoated to give a 'mineral' finish or re-coated with topcoat to give a textured finish. For a neat finish use masking tape or batons to define the edges of the aggregated areas. When the topcoat has fully cured "grabbing" the aggregate, sweep off any excess.

Mixing buckets can be re-used. To clean tools, use acetone in a re-sealable container. It is advisable to use paintbrushes with unpainted handles as the paint will contaminate the resin.

Always use disposable latex gloves when handling resins and topcoat, use hand cleaner or wipes to clean off resin or topcoat.

**NEVER** clean hands with acetone.



When applying topcoat, never mix more than 10ltrs at a time, less in warm weather. This will lessen the risk of the topcoat going 'off' in the bucket and becoming unusable, wasted product, wasted money..

## SECTION 5: GENERAL DO'S AND DONT'S

### SAFE WORKING

HSE G33

It is the installer's responsibility to establish safe working practices for themselves, their employees, their customers and the general public. Material Safety Data Sheets (MSDS) are available for all ProGRP components and it is the installer's responsibility to ensure that all concerned are aware of the hazardous nature of the product. Always use Personal Protection Equipment (PPE) i.e. hand protection, eye protection, ear protection, hard hats and safety footwear when and where appropriate.

### HOT WEATHER WORKING

On a hot sunny day, the roof deck can reach very high temperatures before you even begin laminating. This in turn means the decking can exceed the recommended upper temperature limit for application of ProGRP of 35degrees centigrade, to reduce this problem, cover the roof as decking progresses, removing the covers only at the last minute.

Mix in smaller quantities, 5kg/ltrs max, laminate in short runs.

After laminating, the roof surface can become too hot to apply the topcoat. Applying topcoat to a roof that is too hot can affect the normal curing cycle of the topcoat and produce a roof that remains 'tacky'. This can be avoided by getting the timing right i.e. laminating and topcoating at the coolest parts of the day. Keep all liquid products in the shade, resin, topcoat catalyst and acetone.

### COLD WEATHER WORKING

Always check the local weather forecast.

**DO NOT** apply resins to wet or frozen boards, if you ignore this advice the ProGRP will de-laminate.

**DO NOT** apply below minimum temperatures i.e. 5°C

Keep a waterproof sheet handy to cover the roof in case of rain.

### TECHNICAL HELPLINE

Should you require technical support call 01977 663 133

# PRIMARY MATERIALS

Roof Area (m <sup>2</sup> )	ProGRP Resin required at a coverage rate of 1.5kg /m <sup>2</sup> (Allows for 10% wastage)		ProGRP Topcoat required at a coverage rate of 0.5kg /m <sup>2</sup>		ProGRP Standard Chopped Strand Matting 450gsm required (33kg covers approx 73m <sup>2</sup> )			Catalyst (1kg) based on 4%	Decking Boards 2.4m x 0.6m x 18mm	
	Kg	N. of Tins	Kg	N. of Tins	M <sup>2</sup>	Rolls Recommended			Kg	1.44m <sup>2</sup> /board
		10kg + 20kg		10kg + 20kg		6.75kg	16.5kg	33kg		
5	7.5	1 + 0	2.5	1 + 0	5	1	-	-	1	5
10	15	0 + 1	5	1 + 0	10	1	-	-	1	8
15	22.5	1 + 1	7.5	1 + 0	15	1	-	-	2	12
20	30	1 + 1	10	1 + 0	20	2	-	-	2	15
25	37.5	0 + 2	12.5	0 + 1	25	2	-	-	2	19
30	45	1 + 2	15	0 + 1	30	2	-	-	3	23
35	52.5	0 + 3	17.5	0 + 1	35	2	-	-	3	26
40	60	0 + 3	20	0 + 1	40	3	-	-	3	30
50	75	0 + 4	25	1 + 1	50	1	1	-	5	38
60	90	1 + 4	30	1 + 1	60	-	-	1	6	46
70	105	1 + 5	35	0 + 2	70	-	-	1	7	54
80	120	0 + 6	40	0 + 2	80	1	-	1	7	61
90	135	0 + 7	45	1 + 2	90	-	1	1	7	69
100	150	1 + 7	50	1 + 2	100	-	1	1	7	77

The values above are recommended coverage rates for estimating purposes we would recommend coverage rates of 1.5kg / m<sup>2</sup> for resin, and 0.5 kg / m<sup>2</sup> for top coat.

## ADDITIONAL MATERIALS

Roof Size (M <sup>2</sup> )	3" Rollers	3" Roller Sleeves	7" Rollers	7" Roller Sleeves	Small laminating rollers	Large laminating rollers	Small Brushes	Large Brushes	Acetone (Litres)	Small Buckets	Large Buckets	Trim Adhesive
5	1	1	1	2	1	1	1	2	5	1	2	1
10	1	2	2	3	1	1	1	2	5	1	2	1
20	1	3	2	4	1	1	2	2	5	1	2	2
40	1	3	2	6	1	1	2	4	5	1	3	3
60	2	4	3	8	1	1	4	6	5	2	3	4
80	2	4	3	10	1	1	4	8	10	2	4	6
100	3	5	3	12	1	2	5	10	10	2	4	7

Preformed GRP edge trims are not included in this table. These are available in 3m lengths and have to be measured separately.

\* If using the 600gsm chop strand matting you will need to use approximately 33% more resin.

Quantity of resin (KG)	Temperature / Catalyst required (millilitres)			
	20-30 °C 1%	13-19°C 2%	9-12°C 3%	5-8°C 4%
1	10ml	20ml	30ml	40ml
2	20ml	40ml	60ml	80ml
3	30ml	60ml	90ml	120ml
4	40ml	80ml	120ml	160ml
5	50ml	100ml	150ml	200ml
6	60ml	120ml	180ml	240ml
7	70ml	140ml	210ml	280ml
8	80ml	160ml	240ml	320ml
9	90ml	180ml	270ml	360ml
10	100ml	200ml	300ml	400ml

### Summer / Winter

We DO NOT recommend laminating in temperatures below 5°C and above 35°C ambient temperature, please consult our technical department.

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Note: These temperature breaks are approximate. Always test catalyst additions with your first mix and adjust up or down as required.