

Roofcell

Technical Data Sheet



Roofcell is an easy to use polyester resin basecoat for GRP roofing, which forms a non-porous, tough, flexible seal. The basecoat is used on existing surfaces such as felt and old GRP roofs, in circumstances where the existing deck cannot be removed. It can also be used in areas which have a concrete or asphalt substrate as long as it is in a good, dry condition. It can be used at temperatures down to 5°C.

Once the existing surface has been prepared and GRP edge trims applied, Roofcell Basecoat is applied onto the surface along with reinforcement mat to form the laminate. Roofcell Topcoat is then applied to complete the roof.

1. Items Required for Application

- **Disposable tools** – 140mm Soft Roller, 140mm Paddle Roller, 75mm Soft Roller, 50mm Brush, Gloves
- **Reusable tools** – Hardener Dispenser, Extension Poles, Buckets
- **Materials required** – 450g/m Reinforcement Mat, Trims, Clout Nails, Trim Adhesive, Hardener (1%-4%), Basecoat (2-3kg/m² depending on surface)

2. Preparing the Deck

Before applying, the entire existing surface which is to be covered should be clean and free from any loose material and debris. The main criteria are to provide a clean, dry surface to ensure the materials can bond to the surface.

- Remove all stone chippings, fungal growth, loose solar coverings, dust etc. by using a stiff brush and shovel. We recommend power washing the surface once it has been cleared; however it is the installers' responsibility to determine the preferred method of cleaning.
- If you are relaminating an old GRP roof, sand the existing roof with 40 grit sandpaper and wipe down with Acetone.
- Once the surface has been cleaned, you must allow the area to dry before applying the basecoat.
- Any cracks in the existing surface should be repaired, the system won't fix cracks. Blisters or cracks in the felt covering should be cut, opened up, dried out and then repaired.
- Roofcell can be used to repair hairline cracks that may be in concrete.

3. Preparing the Perimeter

Existing felt and details can be encapsulated if they are small enough for our trims to fit over. If they are too big, you will have to:-

- Remove all large timber tilt fillets and edge details to enable our trims to sit flat on the deck and tight up against the timber battens.
- If the Wall Fillet trim doesn't sit tight up against the wall, any felt and tilt fillets that go up the wall will also need removing.
- To fit over existing details, apply a bead of trim adhesive along the front edge, fit your trim over ensuring it is straight and has a good bond, and then fix it down using clout nails or heavy duty staples.

4. Fitting Perimeter Trims

Once the area has been prepared, you are ready to fit your trims.

- Ensure you have timber battens (18mm x 45mm) around the edges of your roof. These battens give the trim support when bonded together with Trim Adhesive.
- Where you have a Fascia/Drip Trim you will need 2 battens with the second batten stepped down 10mm and wherever you have a Raised Edge Trim you will require 1 batten.
- Fit your Wall Fillet Trim first, nailing it down to your deck using galvanized ring shank nails or heavy duty staples.
- Lastly, you will need to fit your remaining trims. Apply a full bead of trim adhesive along the battens, pull your trim into position and fix down to the deck.

HARDENER CHART

Deck/Resin Temp	22-35°C	18-22°C	12-17°C	5-11°C
% Hardener	1%	2%	3%	4%

TABLE OF PERCENTAGES IN MILLILITRES, PER WEIGHT OF RESIN USED

Amount of Resin (KILO)	Hardener Used (MM)			
1	10	20	30	40
2	20	40	60	80
3	30	60	90	120
4	40	80	120	160
5	50	100	150	200
6	60	120	180	240
7	70	140	210	280
8	80	160	240	320
9	90	180	270	360
10	100	200	300	400

5. Applying the Basecoat and Reinforcement Mat

Once the area has been prepared and the trims fixed around the perimeter, follow the RoofCell Installation guide for the bandage and laminate stages. 75mm Reinforcement Bandage will need to be applied to all trim joins, corners and details. 450gm Reinforcement Mat will need to be measured out for the entire area of the roof and strips will need to overlap each subsequent strip on the feathered edge by 50mm. The Reinforcement Mat should also overlap the trim edges by at least 50mm (but not over the edge of the trim).

When all Bandage and Reinforcement Mat has been cut to size, mix a small amount of RoofCell Basecoat for bandage work. To apply the Basecoat you must -

Give the Basecoat a vigorous stir in the can before decanting into your mixing bucket. Add the hardener to the Basecoat in the mixing bucket. The hardener addition is between 1% and 4% depending on the temperature. Once you add the hardener to the Basecoat, give it another thorough mix ensuring it is all mixed in.

The bandage and detail work should be completed before the main roof area is laminated. Apply Basecoat to both sides of the pieces of bandage/matting for trim joins and corner details using your Brush/75mm Soft Roller and shape into place using a brush.

Then using a soft roller, work in one metre square sections and apply RoofCell Basecoat to the main body of the roof at the rate of between 2kg - 3kg/ m² depending on the type of surface. Cover the first square metre section with Reinforcement Mat and then apply Basecoat onto the mat (use the Basecoat application chart for the correct amount of Basecoat to be added. Leave the matting to soak into the Basecoat for 1-2 minutes before paddle rolling.

Use a paddle roller to consolidate the mat, passing over the saturated matting to remove any trapped air. Continue this process until the entire roof has been consolidated. A wash coat of Basecoat should be added to the consolidated areas of the roof after each square metre has been completed.

RoofCell Basecoat has a 20-40 minute working time, only mix material for an area that can be covered within this time. Please consult the mixing section before application. The Basecoat laminate should be ready to work on for Topcoat application after 1 hr - 1 hr 30 minutes.

IMPORTANT - Do not apply the Basecoat too thin. Ensure entire surface is coated. Any area that has loose chippings and aren't fully coated would require another coat of Basecoat. An insufficient coverage could cause the system to fail.

6. Topcoat

Once the laminate is fully cured, it can be Topcoated. Sand down the laminate to remove any loose fibres and wipe the area with Acetone to remove debris. Following the Topcoating guidance in the RoofCell installation manual, apply RoofCell Topcoat to the trim areas first using a small soft roller or a brush for detail edges. Apply RoofCell Topcoat to the main roof area at a rate of 0.4kg per m² until the entire roof is covered.

7. FAQ

- If it starts to rain during the installation, it is important to stop working and cover the roof area with a visqueen sheet and continue when it has stopped raining. If any water comes into contact with the Basecoat it will contaminate the materials.
- The coverage rate for Basecoat application varies depending on the roof surface. Please refer to the Installation Guide for complete coverage rate guidance.
- Due to the uneven surfaces that RoofCell will be overlaying, some areas may require more Basecoat and may need consolidating more than other areas.
- During the sanding process of the Basecoat, look out for areas with insufficient basecoat, voids, loose stone chippings and repair as necessary. If done on the same day, apply more Basecoat to cover these areas. If it has been left for over 24 hours, sand down and apply more Basecoat (with hardener) and reinforcement mat to the damaged area and allow to cure before topcoating.