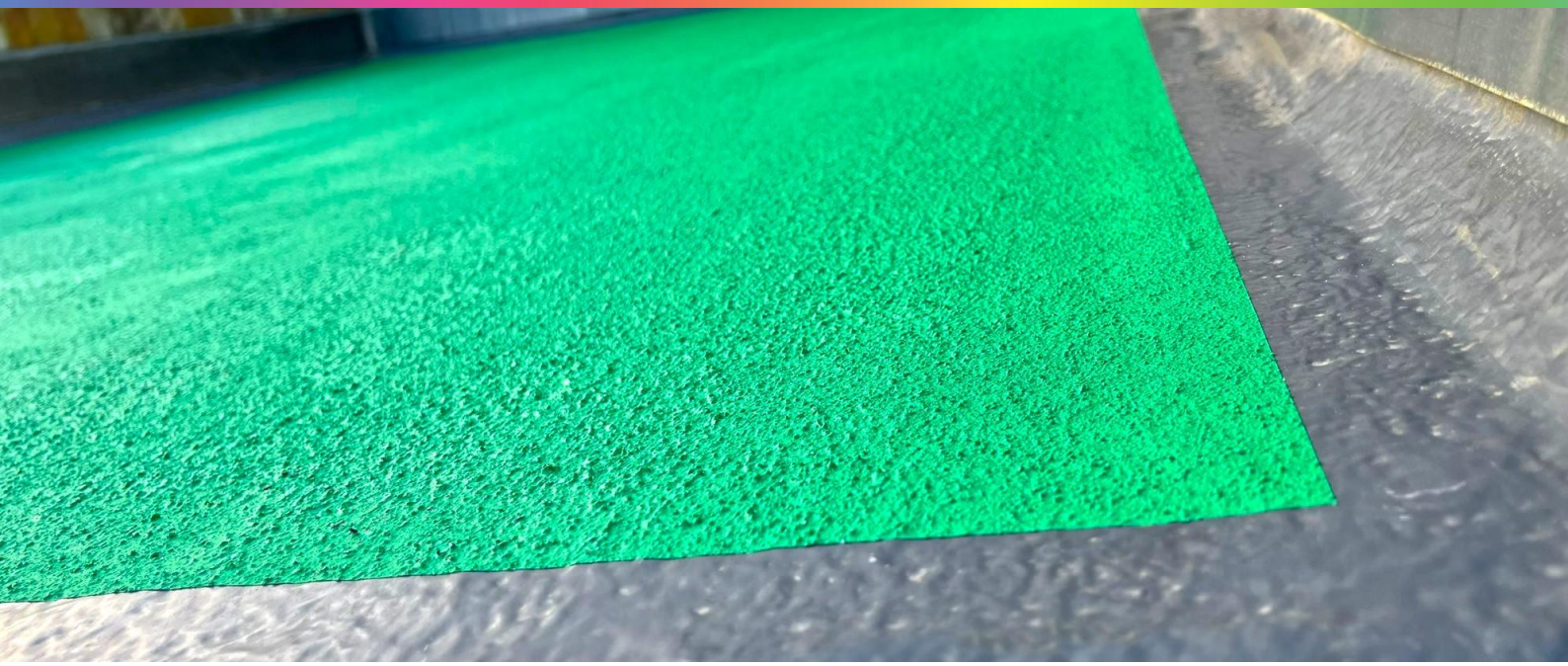
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RESGRIP

Durable anti-slip coating for trafficked areas

RES**GRIP** is a hybrid MMA anti-slip coating suitable for a range of trafficked applications. The anti-slip aggregate is pre-dispersed within the liquid, making for an extremely quick and easy application. RES**GRIP** is a rapid-cure coating that uses Restec Powder Hardener and may require Flexitec Primer.



Technical Data Sheet v1.5

1. Introduction

RES**GRIP** is a hybrid MMA anti-slip coating suitable for a range of trafficked applications. The anti-slip aggregate is pre-dispersed within the liquid, making for an extremely quick and easy application. RES**GRIP** is a rapid-cure coating that uses Restec Powder Hardener and may require Flexitec Primer. Please note, the option to install Restec Sealer Coat (Clear) over RES**GRIP** to provide an easy clean, tougher, and hardwearing finish is available.



RES**GRIP**



RES**GRIP** & Restec Sealer Coat

2. Features & Benefits

- Simple application ensures even, slip resistant finish
- Good slip resistance providing enhanced safety
- Tough and durable with a long service life
- Catalyst controlled, rapid curing, typically 30-40 minutes
- Fast and easy to apply
- Non-toxic binder system
- Highly resistant to discolouration

3. Typical Applications

RES**GRIP** offers a durable anti-slip finish in wide range of applications such as:

- Flat Roofs
- Walkways
- Steps
- Access Ramps
- Platforms
- Parking Bays
- Factory loading Bays/Flooring*

*In all cases – Consult the relevant application advice for further details.

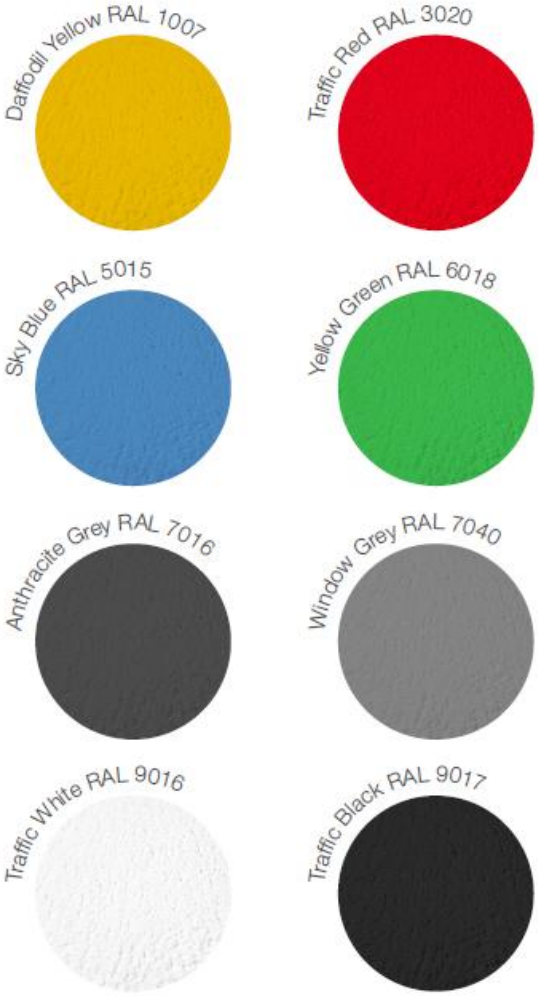


4. Compliances/Approvals

The management system of Res-Tec Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 and BS EN ISO 14001.

5. Colours

RES**GRIP** Anti-Slip Coating is available in a wide range standard of colours.



Other colours are available on request.

6. Suitable Substrates

RES**GRIP** can be applied to a wide range of substrates to create an anti-slip finish, these include;

- Liquid applied Waterproofing Systems (including Restec Waterproofing Systems)
- Concrete
- Asphalt (traffic and roofing grades)
- Metals
- GRP / Timber Deck

Notes:

1. Porous or bituminous surfaces (such as concrete / asphalt / felt) will require priming with Flexitec Primer before application.
2. Metals require priming with Restec Metal Primer.

Substrates must be structurally sound, well adhered and free from excessive movement. The installer should also ensure that the underlying construction can adequately support the proposed traffic loading (including point loading) without undue deformation during the expected lifespan of the system.

Note: For flat roof applications - The membrane and insulation manufacturers should be consulted for advice on supplementary load-spreading sheets below the waterproofing where traffic is frequent e.g. 18mm Plywood / OSB / Recovery Board.

7. Surface Preparation

For best results always follow the following surface preparation and priming advice.

7.1 General Surface Preparation

(All Surfaces)

The following surface preparation assumes that structure is sound and free from defects.

Substrates must be structurally sound, well adhered and free from excessive movement. The installer should also ensure that the underlying structure and any built up construction can adequately support the proposed traffic loading (including point loading) without undue deformation during the expected lifespan of the system.

Thoroughly clean down all areas to be treated, removing any dirt and debris, surface lying water, mould growth, moss, etc.

Inspect all surfaces to assess soundness of existing substrates including any existing coatings, repairs and any test areas. This is to verify compatibility for the proposed coating system and to assess the need for priming.

Remove any existing loose or poorly adhering materials and repair where appropriate. Repair, replace and reinstate any defective fixtures and fittings.

Treat any areas of fungal growth or moss with a fungicidal wash to ensure all spores are destroyed. Power wash to remove any residues.

All surfaces should be clean dry and free from any contaminants.

7.2 Roof Surfaces

General Preparation 7.1 should be followed in all cases prior to substrate specific preparation.

Flat Roof Applications – IMPORTANT

- Particular attention should be paid to roof decks that may contain compressible materials or those that have not been designed to accept loading / point loading.
- The membrane and insulation manufacturers should be consulted for advice on supplementary load-spreading sheets below the waterproofing where foot traffic is frequent e.g. 18mm Plywood / OSB / Recovery Board.
- Adhesion tests should be carried out to ensure compatibility between RES**GRIP** and any existing substrates.

Restec Waterproof Membranes: The membrane and insulation manufacturers should be consulted for advice on supplementary load-spreading sheets below the waterproofing where foot traffic is frequent. General surface preparation 7.1 above should be followed. Then ensure surfaces are solvent wiped with acetone prior to application. Additional preparation may be required if membranes are aged or in imperfect condition (refer to liquid applied membranes / GRP guidance below. No primer required.



Liquid Applied Membranes / GRP: General surface preparation 7.1 above should be followed. Mechanically abrade (grind) any loose and flaking topcoat materials back to the base layer to provide a sound firm edge. Aged / weathered material with a sound topcoat layer will not require abrading, however for materials with a top coat less than 12 months old, mechanical abrasion will be required to the roof edges. Ensure all surfaces are thoroughly scrubbed with clean Acetone prior to coating. Primer: Not usually required (subject to adhesion tests).

Mastic Asphalt (roofing grade): General surface preparation 7.1 above should be followed. Any blow holes in asphalt are to be smoothed out or removed and levelled off using a suitable repair compound, i.e. sand cement mix with a suitable hardener. All large non-structural cracks and voids should be cleaned out and made good using a suitable repair compound. Allow repairs to cure prior to coating (check manufacturer's recommendations). Primer: Flexitec Primer (Recommended).



PVC / TPO / EPDM Single-Ply: Due to the variable nature of existing single ply materials (including PVC, TPO, EPDM) adhesion / compatibility test are recommended to confirm suitability and the requirement for an adhesion-promoting primer.

The membrane and insulation manufacturers should be consulted for advice on supplementary load-spreading sheets below the waterproofing where foot traffic is frequent. Any localised damage should be repaired or made good as appropriate. Ensure all single ply surfaces are thoroughly scrubbed with clean Acetone prior to coating. Primer: Restec SP Primer (subject to adhesion tests).





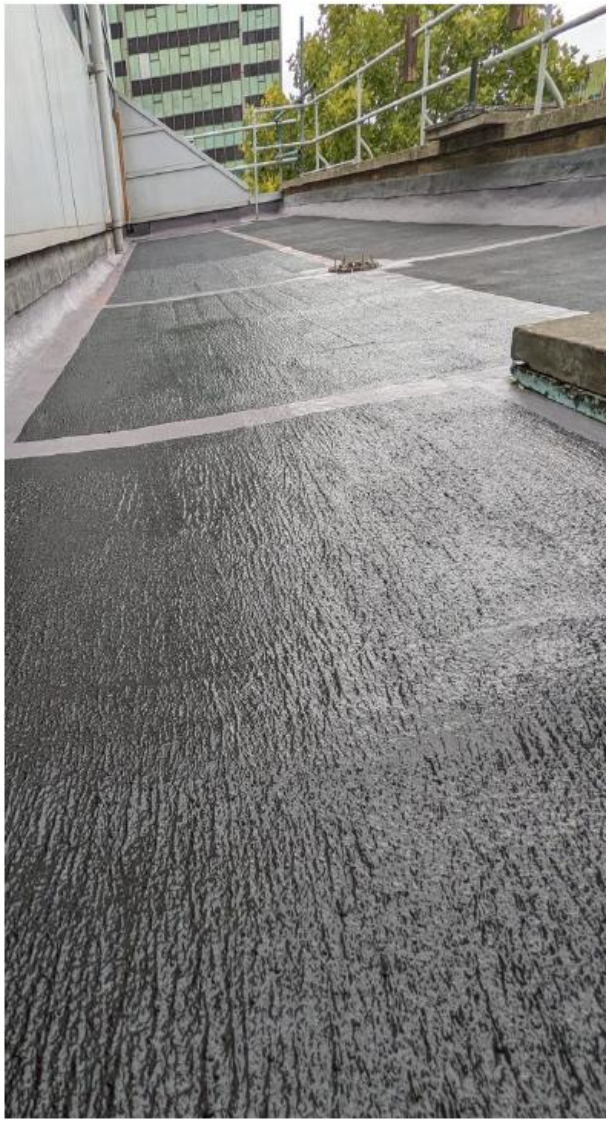
7.3 Other Surfaces

General Preparation 7.1 should be followed in all cases prior to substrate specific preparation.

Concrete / Screed / Masonry: General surface preparation 7.1 above should be followed. Ensure the structure is adequate to support any traffic without undue cracking or deformation during the expected life of the system Any spalled, loose, unsound concrete or brickwork should be broken out and repaired using a suitable repair mortar. All smooth concrete surfaces to be treated should be lightly abraded with suitable equipment (e.g. vacu-blast, diamond disc grind etc) where necessary to remove laitance and/or remove other impervious matter, concrete curing membranes etc, until a clean, dry and open surface is attained. All large non-structural cracks and voids should be cleaned out and made good using a suitable repair compound. Wet or saturated substrates should be allowed to thoroughly dry out before any products are applied. For newly laid concrete/screed, follow general guidelines allowing a curing time of at least 28 days or one week per 25mm, or preferably follow manufacturer's instructions. In the case of polymer modified material, refer to manufacturer's instructions Primer: Flexitec Primer (Essential).

Asphalt / Tar Concrete (e.g. Car Parks, Pavements, etc): General surface preparation 7.1 above should be followed. Ensure the structure is adequate to support any traffic without undue cracking or deformation during the expected life of the system. New bituminous substrates should be allowed to weather for at least 6-8 weeks prior to the installation of RES**GRIP**. Depending on the type of substrate, this can take even longer than 8 weeks, and tests should be carried out on a small area before the full application commences to ensure adhesion can be achieved. Ensure surfaces are clean, dry and free from ice, frost, loose aggregate, oil, grease, road salt and other loose matter that may impair the adhesion of the system.

Grit blasting, high pressure water jetting, low pressure water/abrasive blast cleaning, scarifying, scabbling or other means may be required. To remove dust and other loose matter the road surface should be vigorously brushed. Any oil visible on the road surface must be removed by washing and scrubbing with a suitable detergent solution followed by flushing with clean water or by other suitable means in accordance with HSE regulations. Primer: Flexitec Primer (Recommended).



8. Primer Application

(Where Required)

Primers may be required depending on the substrate to be coated (refer to Section 7 for requirements).

8.1 Flexitec Primer

(Inc. Bituminous, Cementitious Surfaces and Porous Surfaces)

Consumption Rates: Flexitec Primer is applied at a coverage rate of 4-6m²/Litre (3.5 – 5.3m²/kg) depending on surface roughness. Rough or highly porous surfaces will significantly reduce the coverage rate.

Catalysing: Flexitec Primer requires Restec Powder Hardener at a minimum of 2% and a maximum of 4% depending on temperature to achieve a dry time of 30 – 60 mins.

The table below provides recommended powder hardener addition rates depending on Flexitec Primer quantities and temperature ranges. Powder hardener is added to Flexitec Primer in the form of level scoops using the scoop provided. IMPORTANT – The temperature ranges shown are to be used as a guide to the amount of powder hardener to use. Always test the pot life in the prevailing conditions by performing a test mix at the suggested powder hardener level before you start application. Adjust powder hardener levels up or down as required to gain the pot life you require. Remember it is always possible to use intermediate levels (e.g. 2.5%) to gain close control of the pot life.

Recommended Powder Hardener Addition Rate:		4%	3%	2%
Temperature Range:		5-10°C	11-17°C	18-30°C
Amount of Flexitec Primer		Number of Hardener Scoops	Number of Hardener Scoops	Number of Hardener Scoops
Volume	Weight			
1 ltr	1.1kg	4	3	2
2 ltrs	2.3kg	8	6	4
3 ltrs	3.4kg	12	9	6
4 ltrs	4.6kg	16	12	8
5 ltrs	5.7kg	20	15	10

Cold Weather Applications: When using the Flexitec Primer Winter Accelerator you can apply the primer when deck temperatures are as low as 1°C.

It is not recommended to catalyse more than 5kg at a time. When working large areas decant the primer into manageable quantities and always be aware of your pot life.

Application: Prepare surface as outlined in Section 7. Stir the Flexitec Primer thoroughly in the original container, mixing from top to bottom. Pour the calculated amount of primer into calibrated bucket / suitable container on weighing scales and replace lid on container to prevent contamination or unnecessary losses to atmosphere.

Do not attempt to mix more than 5 kg (4.5 litres) at one time, and during the hot summer months this should be considerably reduced. Add the required number of level powder hardener scoops to the decanted Flexitec Primer (see the table on page 6 for guidance). Thoroughly stir the powder hardener into it is fully dissolved into the resin for a minimum of 2 minutes.

Once hardener has been stirred in apply the Flexitec Primer by roller (or brush if access restricted) to the prepared surface at the required coverage rate within the range of 4-6m²/Litre (3.5 – 5.3m² / kg). Ensure an even, uniform application across all surfaces. Touch in any suspect areas where necessary and then allow to dry before over-coating. The cure time is approximately 30 – 60 minutes depending on application conditions. Ensure the primer is over-coated within 7 days. After this period consult your distributor for advice.

9. RESGRIP Application

9.1 Consumption Rates:

For most applications, RES**GRIP** is applied with a 250mm medium pile roller at a typical coverage rate of 1.0 – 1.7 kg/m² (0.6 – 1.1 ltr/m²) depending on surface roughness.

The product should be applied to the substrate and 'back rolled' to produce the final surface finish.

Note:

- At 1.0Kg/m², a 10Kg tin can cover up to 10m² on a very smooth surface using a medium pile roller.
- Additional material will be required for rougher substrates.
- Additional material will be required if using a longer pile roller. This will also increase the texture of the final finish.

RES**GRIP**	Min Coverage (kg)	Min Coverage (Litres)
Normal Application Range	1.0 – 1.7kg/m²	0.63 – 1.06 l/m²
Very Rough Surfaces	2.0 – 2.7kg/m²	0.78 – 1.6 l/m²

Catalysing: The table below provides recommended powder hardener addition rates depending on RES**GRIP** quantities and temperature ranges. Powder hardener is added to RES**GRIP** liquid in the form of level scoops using the scoop provided. IMPORTANT – The temperature ranges shown are to be used as a guide to the amount of powder hardener to use. Always test the pot life in the prevailing conditions by performing a test mix at the suggested powder hardener level before you start application.

Adjust powder hardener levels up or down as required to gain the pot life you require. Remember it is always possible to use intermediate levels (e.g. 2.5%) to gain close control of the pot life.

It is not recommended to catalyse more than 10kg at a time. When working large areas decant the resin into manageable quantities and always be aware of your pot life.

IMPORTANT - Please note that due to the aggregates included in the system the powder hardener rates for RES**GRIP** are different to other products. The powder hardner addition rates are based on weight (KG) rather than volume (Ltr). RES**GRIP** requires powder hardener at a minimum of 1 % and a maximum of 2.5 % depending on temperature to achieve a dry time of 20 – 40 mins.

Powder Hardener Addition Rate:	2.5%	2.0%	1.5%	1.0%	0.5%
Temperature Range:	1-4°C	5-14°C	15-19°C	20-24°C	25-30°C
Amount of RES**GRIP** (Kg)	Number of Hardener Scoops	Number of Hardener Scoops	Number of Hardener Scoops	Number of Hardener Scoops	Number of Hardener Scoops
1kg	2.5	2	1.5	1	0.5
2kg	5	4	3	2	1
3kg	7.5	6	4.5	3	1.5
4kg	10	8	6	4	2
5kg	12.5	10	7.5	5	2.5
6kg	15	12	9	6	3
7kg	17.5	14	10.5	7	3.5
8kg	20	16	12	8	4
9kg	22.5	18	13.5	9	4.5
10kg (Full Tin)	25	20	15	10	5

The table above provides recommended powder hardener addition rates depending on RES**GRIP** quantities and temperature ranges. Powder hardener is added to RES**GRIP** liquid in the form of level scoops using the scoop provided.

IMPORTANT – The temperatures ranges shown are to be used as a guide to the actual amount of powder hardener to use. Always test the pot life in the prevailing conditions by performing a test mix at the suggested hardener levels to determine the required rates.

9.2 Application Conditions:

The substrate, air and material temperature must be a minimum of 5°C before use. Do not apply if air or substrate temperature is above 40°C.



Application:

1. Prepare surface as outlined in Section 7. If primer is required, mask off the designated area and apply the primer in accordance with Section 8 and remove masking tape after application and before primer dries.
2. Mask off the designated area.
3. Stir the RES**GRIP** thoroughly in the original 10Kg container using a mechanical mixer, mixing from top to bottom. If a smaller mix than 10Kg is required, pour the calculated amount of RES**GRIP** into calibrated bucket / suitable container on weighing scales and replace lid on container to prevent contamination or unnecessary losses to atmosphere. Do not attempt to mix more than you can use and consider using smaller mixes during the hot summer months.
4. Add the required number of level powder hardener scoops to the RES**GRIP.** Now using the mechanical mixer again, thoroughly stir the powder hardener into it is fully dissolved into the RES**GRIP** for a minimum of 2 minutes. The product is now ready to apply.
5. Once the hardener has been stirred in apply using a 250mm Restec solvent-resistant medium pile roller to the prepared surface at the required coverage rate. The product should be backrolled to produce a even anti-slip finish.
6. Ensure an even, uniform application across all surfaces. Touch in any suspect areas where necessary. Remove the masking tape whilst wet and ensure RES**GRIP** is fully cured before subjecting to disturbance or traffic.

Optional Restec Sealer Coat:



For areas requiring an easy clean, tougher, and hardwearing finish, Restec Sealer Coat can be applied. The sealer is to be catalysed as below and then the contractor is to apply Restec Sealer Coat (Clear) at a minimum coverage rate of 0.6Litres/ m^2 (1.67m^2/Litre). Remove masking tape and then allow to cure. See Sealer Coat Hardener rates in the table below.

Recommended Powder Hardener Addition Rate:		4%	3%	2%
Temperature Range:		5-10°C	11-17°C	18-30°C
Amount of Sealer Coat		Number of Hardener Scoops	Number of Hardener Scoops	Number of Hardener Scoops
Volume	Weight			
1 ltr	1.0kg	4	3	2
2 ltrs	2.1kg	8	6	4
3 ltrs	3.1kg	12	9	6
4 ltrs	4.2kg	16	12	8
5 ltrs	5.2kg	20	15	10
6 ltrs	6.3kg	24	18	12
6 ltrs	7.3kg	28	21	12
6 ltrs	8.3kg	32	24	12
6 ltrs	9.4kg	36	27	12
6 ltrs	10.4kg	40	30	12

10. Maintenance & Repair

In normal service condition and installed on a suitable substrate, RES**GRIP** can be expected to provide an anti-slip coating for between 5 – 20 years, depending on application and level of usage. Heavy duty usage may shorten the lifespan. The service life of the product will also be dependent on the suitability, condition, and longevity of the underlying substrate.

Note - Alternative RESTEC products are available on request from Restec for Heavy duty traffic / high usage applications and/or decorative balcony applications.

In the event that damage occurs to the coating, RES**GRIP** can be repaired as follows:

- The damaged and or de-bonded system shall be cut back to firmly adhering material, squaring off the area to be reinstated.
- Clean and degrease area to be repaired, adhering to the guidance provided in Section 6, and allow to dry. Mask of the area, allowing for a 50mm overlap on to the existing well-adhered areas of RES**GRIP**. Apply any primers necessary in accordance with Section 7 and allow to dry. Apply RES**GRIP** to the designated area in accordance with Section 8 and allow to fully cure before disturbing or trafficking.
- If the system has reached the end of its serviceable lifespan, another application of RES**GRIP** can be applied over the cleaned and prepared previous coating.

11. Packaging & Storage

RES**GRIP** is supplied in pre-weighed 10kg (~6.25 ltr) pails. The catalyst (hardener) is supplied separately. It is recommended that RES**GRIP** should be kept totally dry and stored away from direct sunlight and areas of potential contamination.

Stable for at least 12 months when stored in a cool, dry place. Long periods of over-heating (e.g. external storage in summer) may lead to gelling of the material. Dispose of used packaging in accordance with guidance in the SDS.

12. Health & Safety

For further information consult the relevant Safety Data Sheet (SDS). For applications in internal or poorly ventilated conditions, pay special attention to the guidance within the separate document available from Restec.

Disclaimer

This Technical Data Sheet is for general information only. Installers must test all applications for suitability before use.

Restec Ltd reserve the right to amend product specifications without prior notice. The information provided in this literature is given in good faith. Recommendations for use should be verified to ensure compliance with all current building regulations and standards. Please check that this Technical Data Sheet is the latest version by contacting technical services on 0845 4504 193 or visiting www.restecroofing.co.uk

