

TP RESIN SF

Binder for Resin Bound Surfacing



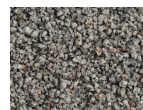
Description

TP Resin SF is a flexible, colour and light stable, polyurethane resin bound paving system. It has been designed to enhance the visual appeal of Driveways, Patios, Footpaths, Pedestrian Precincts, Schools, Commercial and Retail premises, Heritage sites and Tree Pits. Utilising natural and decorative aggregates it transforms tired looking concrete and asphalt surfaces overnight.

Selected aggregates



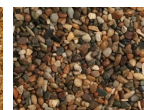
Dorset
Golden Pea



Silver Grey
Granite



Autumn Gold



Brittany
Bronze

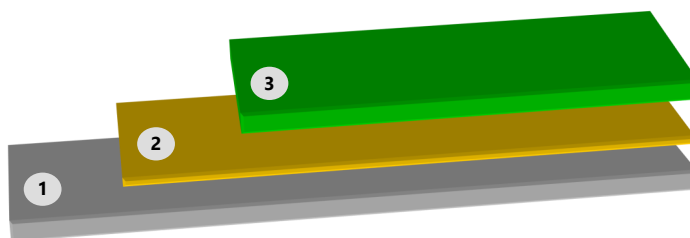
Many other aggregates are available

Benefits

- Hardwearing and capable of withstanding vehicular and pedestrian traffic.
- Rapid installation and fast cure, ensuring areas are returned to use within 3 hours @ 20°C.
- Excellent adhesion to suitably prepared substrates.
- Flexible and durable giving a long life.
- Solvent-free.
- Quick, easy and cost effective application.
- Cold applied polyurethane system applied by trowel.
- Low temperature cure, down to 5°C.
- Seamless and aesthetically pleasing.

System

- 3 TP Resin SF
- 2 Primer (Substrate dependant)
- 1 Substrate



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Coverage

Typical Area and quantity of Resin/Stone per 100kg aggregate blend at 16mm depth:

Area	3.7m ²
Resin	7kg/m ²
Stone blend	100kg/m ² (1-5mm)

Coverage - system thickness

Standard Resin Bound systems are based on using the following calculation:

Example: Size of largest stone 5mm x 3 = 15mm depth, this is the minimum depth for any application.

Coverage per m²

Depth	Stone	Resin	Area
15mm	24.75kg	1.73kg	1m ²
16mm	26.40kg	1.84kg	0.94m ²
17mm	28.05kg	1.96kg	0.89m ²

These figures are for guidance only and refer to specific applications.

Potlife

20 min @ 20°C

Cure

Primary cure (foot traffic)	3-4 hrs @ 20°C
Primary cure (vehicle traffic)	24 hrs @ 20°C
Full cure	7 days @ 20°C

Please note that cure times increase considerably at lower temperatures and reduce at higher temperatures. These figures are for guidance only and refer to specific applications

Packaging

TP Resin SF is currently supplied in a 7kg unit and designed for use with a typical 100kg aggregate blend.

Pack A - Hardener	5L pot
Pack B - Resin	5L pot

Note: TPSF can be supplied in any unit size required and for Tree Pits, smaller packs are available.

Technical information

Tensile strength (Binder)

7 days	3.01 N/mm ²
3 months	5.38 N/mm ²

Elongation (Binder)

7 days	55.90%
3 months	36.33%

Chemical resistance

- Petrol
- Diesel
- Oil
- Cleaning chemicals

Temperature

Both coverage and cure depend on ambient and surface temperatures, the type and condition of the substrate and the aggregate temperature and size.

Recommended temperature range for storage, transport and application is: 5°C and 30°C. Please contact Optus for other conditions.

The substrate should be dry and there should be no threat of rain.

Cleaning

Safesolve should be used for cleaning tools, etc.

Health and Safety

Gloves, overalls and barrier cream should be used when working with TP Resin SF. For full details please refer to the appropriate Health and Safety Data Sheet.

Information

All technical data, measurements, etc. given on this data sheet are based on laboratory tests. Due to practical circumstances beyond our control, actual data may deviate from the indicated values.

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Mix guidelines

Resin Bound Paving/Tree Pit Surfacing mix proportions and layer thickness depend on many factors including superimposed loading, stone size and grading, stone type and the nature of the substrate.

Tree Pit Surfacing for example which sits directly over permeable stone and tree soil is usually 40 to 50mm thick with a TPSF content of between 5 & 5.5%. This would be increased with higher loadings. The stone used must be open graded to allow both water and air to reach the tree's roots and would be laid around any watering points and up to a tree collar.

Thickness must be at least 3 x maximum stone size (for 5mm stone between 15 and 20mm).

Mix proportions are determined primarily by strength requirements to support superimposed loads. A close graded stone will support greater vertical and horizontal load but will have a higher demand for TP Resin SF binder due to the greater surface area of the stone. A binder content of 7% and above is required for most mixes on pedestrian and vehicle areas. The installer must satisfy themselves that the mix proportions are suitable for the intended use. This should include trial mixes.

Care should be taken when using stone with a high flakiness index (eg. some flints) or with a high proportion of dust. A modified binder is required for tumbled glass.

Depending on the slope of the substrate, the use of the surface and the type of stone it may be necessary to apply a light scatter of anti-slip material to improve the frictional characteristics of the surface.

Preparation

General

Ensure both the Product Information and Safety Data Sheets have been read and understood.

Keep materials dry and warm (when temperatures are low). Ambient temperature should be between 5°C and 30°C during application and cure. The substrate should be clean, dry and structurally sound. **There should be no threat of rain.**

Mask all adjacent surfaces, lift manhole lids, provide side restraint (kerbs, beading, etc) and install any additional drainage or outlet for water seeping through surfacing)

Any free edges should be restrained by an end-stop bead of the correct depth. This will serve to prevent the edges from deteriorating, provide a guide to assist application and ensure that the correct thickness of surfacing is being applied. The beads are fixed using an instant-grab caulking adhesive, nailed or screwed.

Preparation cont...

New areas intended for overlayment with TP Resin SF should be constructed in either concrete at 50mm thickness of AC14 close sort asphalt concrete, 100/150 pen to BS E131081:2006 (Bitumen Macadam at 150 to 225 Type 1 graded sub-base. It should be capable of withstanding the maximum expected loading.

Concrete Substrate:

Concrete substrates should be at least 28 days old. New surfaces should be slightly textured. Remove all contamination including oils and greases, laitance, algae, moss, etc. Remove any dust by vacuuming. Remove oil, de-icing salt, grease and similar contamination by washing with a suitable degreasing agent, followed by flushing with water. **Dry thoroughly** and prime with one coat of Europrime CT (if the concrete is permeable, friable or weak).

Bituminous Substrate:

Remove all contamination including oils and greases. Sweep clean to remove any dust. **Dry thoroughly.**

Tree Pits

Above the tree root ball a solid base should be created to accept the surfacing. This will include at least 150mm of free draining compactable fill such as Type 3 fill to SHW C185. The surface should be completely dry before application.

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Mixing

Each bag of stone must be checked to ensure it is completely dry and free of dust.

Mixing is carried out in a forced action mixer such as that supplied by Baron UK Ltd suitable for mixing up to 100kg of stone. Keep mixer clean from cured resin contamination.

1. Add the stone to the mixer and mix until homogeneous.
2. Using a drill and paddle stir Pack B until a consistent colour and pour into a container. Add Pack A and mix together until homogeneous (about 2 mins).
3. Add to the stone and mix until homogeneous (50-60 secs).
4. Discharge into a clean wheelbarrow and transfer to the application area.

Application

The application area must be contained in order to support the wet resin mix before it cures.

1. Tip the surfacing material onto the application area and spread to approximate level using a flat bladed squeegee (spazzle) or level between battens as appropriate.
2. Using a bullnose trowel spread and compress surfacing material to its final level standing back frequently to verify the evenness of the application. Keep the trowel clean with solvent which will also assist with final finishing.
3. Ensure the rate of coverage is sufficient to enable adjacent mixes to meld smoothly into one another. Addition of too much catalyst could lead to problems in this respect.
4. Joints in concrete must be taken through the surfacing.
5. An outlet for surface water run-off can take the form of a linear drain or gaps in edgings. Falls should be provided in the substrate leading to all drainage points.
6. The final performance of TP Resin SF based surfacing is determined by the choice of resin, aggregate and degree of compaction during installation. The installer should satisfy himself that the proposed mix is suitable for the intended use.
7. **Note.** *Some catalyst is already pre-mixed in pack B unit.

The information given in this product, technical and application data sheet is given in good faith, based on current knowledge and experience but we have no control over the quality or the conditions of the substrate or the many differing factors affecting the use and application of the product. It relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of the company's knowledge and belief, accurate as of the date indicated. It is the user's responsibility to satisfy themselves as to the suitability and application of such information for their own use.