



Unique Polymer Systems

ADVANCED POLYMER SURFACE ENGINEERING TECHNOLOGY

Unique Polymer Systems – Grip Tech



UPS 'Grip Tech' is a high performance solvent free epoxy coating combined with an abrasion resistant aggregate designed for use as a universal slip deterrent system for mineral and metallic surfaces.

UPS 'Grip Tech' is based on a blend of epoxy resins and polyamines reinforced with a range of inorganic pigments and fillers which produce a system with a high level of mechanical strength and adhesion. This unique resin system when in combination with an available choice of aggregates offers a slip deterrent surfacing system that can be applied to a wide variety of surfaces even in cold damp conditions.

UPS 'Grip Tech' is safe, simple and easy to use and can be applied in one easy application and is ideal for use on steps, ramps, walkways, tank tops, tailgates, machinery areas etc.

Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.

SURFACE PREPARATION

All heavy dirt deposits and other contamination should be removed before carrying out the following methods of surface preparation.

Metal Surfaces: Surfaces must be either blast cleaned or mechanically abraded to remove all rust, scale, paint and other contaminants. When using mechanical cleaning a coarse profile should be obtained, polishing of the surface must be avoided. The prepared surface should then be degreased using UPS'Cleaner'.

Concrete Surfaces: All dust, paint, oil or grease must be removed and the surface should be firm and dry. Any laitence must be removed by mechanical cleaning. Dense concrete and power floated concrete should be lightly abrasive blasted or mechanically abraded to provide a physical key, resultant dust and debris must be removed.

Wooden Surfaces: Surfaces must be dry and free from oil, grease and paint, then abraded to provide a key. All resultant dust and debris must be removed.

Quarry Tiles: Surfaces should be abrasive blasted or ground using an angle grinder to create a suitable profile, all abrasive dust and residue should then be removed. The prepared surface should then be thoroughly degreased using UPS'Cleaner'.

Where a specific pattern is required, masking tape should be laid firmly on the prepared surface to provide the pattern. The masking tape should be firmly bonded to the surface to prevent seepage under the tape.

MIXING

UPS 'Grip Tech' is supplied as a three component material comprising a resin component, a hardener component and graded aggregate component.

The resin component should be stirred, and whilst continually stirring add the contents of hardener and continue mixing until a completely streak free material is produced. Thorough mixing is extremely important and once the material appears mixed, further mixing should be undertaken to ensure there is no unmixed material, particularly on sides of containers.

When less than full units are required the resin and hardener should be measured out by weight, in the ratio of 4 parts resin to 1 part hardener, into a clean container and thoroughly mixed as before.

The mixed material must be applied within 25 minutes of mixing at 20°C.

APPLICATION

Application should not be carried out of temperatures below 5°C nor when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

UPS 'Grip Tech' should be applied evenly over the prepared surface using a stiff bristled brush or squeegee at the optimum film thickness of 250 microns (10 mils). The mixed material should be worked into the surface to ensure complete wetting of the surface.

Whilst the applied material is still wet, UPS 'Grip' should be scattered over the surface to completely cover the surface.

Approximately 1.450 kg of aggregate should be applied per square metre to provide complete coverage (approximately 2.7 kg per unit).

As soon as the aggregate has been applied all masking tape should be removed. If the UPS 'Grip Tech' system is allowed to cure before the masking tape is removed, removal will be extremely difficult.

Once the system has cured excess aggregate can be brushed clear of the surface.

All equipment must be cleaned IMMEDIATELY after use with UPS'Cleaner'.

All equipment must be cleaned IMMEDIATELY after use with UPS'SFE Thinners'.

Theoretical Coverage Rate

2.35 m²/kg at 250 microns dft (24 ft²/kg at 10 mils dft)

Recommended Film Thickness

Wet 250 microns (10 mils)

Dry 250 microns (10 mils)

PHYSICAL CONSTANTS

Mixing Ratio	Resin	Hardener	
	2	1	By Volume
	4	1	By Weight

Appearance	Resin	Thixotropic Coloured Liquid
	Hardener	Clear Amber Liquid
	Aggregate	Coloured Granules

Drying & Cure times at 20°C (68°F)

Usable Life	25 minutes
Touch Dry	4 hours
Hard Dry	16 hours
Min. Overcoating	4 hours
Max. Overcoating	2 days
Full Cure	7 days

Volume Solids 100%

V.O.C Nil

Shelf Life Use within 5 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F)

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Food Contact Meets U.S.D.A. requirements for incidental food contact.
Meets FDA CFR 21.175.300 requirements for food contact.

PHYSICAL PROPERTIES

Adhesion (on concrete) 35kg/cm² (500psi) cohesive failure of concrete
ASTM D4541

Adhesion (on quarry tile) 85kg/cm² (1200 psi) cohesive failure of quarry tile
ASTM D4541

Compressive Strength 750kg/cm² (10,700 psi)
ASTM D695

Tensile Shear Adhesion 195kg/cm² (2800 psi)
(on grit blasted steel)
ASTM D1002

HEALTH AND SAFETY

As long as normal good practice is observed UPS 'Grip Tech' can be safely used.

Protective gloves should be worn.

A fully detailed Material Safety Data Sheet is either included with the material or is available on request.

PACKAGING

Supplied in 0.800kg packs.

FOR FURTHER INFORMATION PLEASE CONTACT

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests.



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