Pumagrip HD 3

Product Description:

Pumagrip HD 3 is a heavy duty, four-component, flexible resin, which when scattered with natural or synthetic aggregates creates a slip resistant profiled surface suitable for car parks, ramps and pedestrian walkways.

Suitable aggregates are washed and dried bauxites, granites or basalts (natural or coloured), in sizes 1.0 - 3.0 mm for vehicular or 0.5 - 1.5 mm for pedestrian use.

Pumagrip HD 3 is suitable for use on concrete, polymer modified sand/cement screeds, suitable asphalt, wood and steel surfaces. With the wide choice of natural and synthetic aggregates available, patterns and logos can be easily created.

Features & Benefits:

- Flexible.
- Seamless.
- Rapid installation/minimal downtime.

Appearance:

Naturally buff/beige in colour.

Health & Safety:

Refer to product Safety Data Sheet before use.

Technical Advice:

For further information on this or any other Resdev product, please contact our office.

Application Conditions:

Pumagrip HD 3 can be applied at temperatures between 5 - 30 ºC. At low temperatures the material will exhibit less flow than at warmer temperatures and may be more difficult to apply at low thicknesses. The maximum atmospheric relative humidity should be 75%.

The substrate and uncured floor must be kept at least 3 ºC above the dew point to reduce the risk of condensation or blooming on the surface, from before priming to at least 24 hours after application. Surfaces must be completely dry before installation otherwise the material may blister and/or de-bond.

Surface Preparation:

Inadequate preparation will lead to loss of adhesion and failure. In flow applied systems there is a tendency for the finish to mirror imperfections in the substrate.

Grinding or light vacuum-contained shot-blasting is therefore preferred over planing for these systems on concrete unless a highly textured finish is desired. Percussive scabbling or acid etching is not recommended.

Asphalt is a flexible material and will flow, flex and move and often suffer surface cracking. It should therefore be anticipated that cracks will also appear in the resin bonded surfacing. New asphalt should have a PEN number below 100 and should be at least one month old to ensure that any volatiles have escaped before applying the resin. The asphalt should be free of any oils and/or greases and washed down with a proprietary degreaser if necessary and thoroughly dried. A higher PEN number indicates a softer, weaker, more flexible material which is more likely to result in cracking and potential failure of the installation.

It is not uncommon for asphaltic surfaces to be badly formed, especially on domestic driveway and paths, and for this reason resin bonded surfacing is best applied to structurally sound concrete or screed. When applying to asphalt, it is better to apply to surfaces containing a larger aggregate, 6.0 - 10.0 mm or larger. Any open textured surface should be filled with a scratch coat to minimise the amount of resin lost within the pores of the surface.

Refer to the **Resdev Guide to Surface Preparation** for further information.

Priming:

A primer is not always necessary as **Pumagrip HD 3** has excellent bond strength to well prepared concrete, sand/ cement screeds, suitable asphalt, timber and steel. Bond strength testing to BS EN 13892-8 should be carried out where doubt exists.

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Where there is a risk of excessive resin absorption into the substrate due to high surface porosity **Pumadur Primer** should be used where the substrate humidity is <75%. Where the substrate relative humidity is >75%: **Pumaprime DPM** should be used.

Application:

Prior to mixing, the temperature of all components should be between 15 and 25 °C. Add the hardener component to the beige resin component and mix using a low speed electric mixer (300 - 400 rpm) for at least 3 minutes until homogeneous. Keep the mixing paddle fully submerged to avoid the entrapment of air and scrape the sides and bottom of the vessel several times.

Decant the mixture into a suitable mixing vessel and gradually add the filler component whilst continuing the mixing action.

When all the filler has been added, mix for a minimum of 3 minutes until a uniform coloured, lump-free mix is obtained. Care should be taken to ensure that any material adhering to the sides, bottom and corners of the mixer is thoroughly blended in. Unduly extended or vigorous mixing should be avoided in order to minimize air entrainment.

Pour the mixture immediately onto the surface an apply using a steel float, pin rake or squeegee and spike roller thoroughly within 5 minutes to remove trapped air.

Plan the work area to ensure a constant wet edge and work within the working time of the material. Broadcast the aggregate into the binder within 15 minutes of mixing in thin layers until the surface has an evenly distributed appearance. Monitor the broadcast area to ensure that any bare areas which may appear are re-broadcast promptly. The excess aggregate must be removed from the surface.

Cleaning:

Regular cleaning is essential to enhance and maintain the life expectancy and appearance of the floor. Resin bonded aggregate systems can be easily cleaned using a low pressure hose, rotary scrubber drier or wet vacuum. Do not use high pressure hoses as the high pressure could lead to de-bonding of the aggregate.

EU Directive 2004/42/EC:

Complies with category j type SB (< 500 g/l).

Limitations:

Do not proceed with application if atmospheric relative humidity is, or is anticipated to be, >75% or if the surface temperature is <3 ºC above the dew point. Application should not commence when the substrate temperature or the ambient temperature is, or is anticipated to be, <5 ºC during the application or within the curing period.

PRODUCT INFORMATION	
Chemical Type	Polyurethane binder for anti-slip aggregates
Packaging	**Pack Size: 28.66kg** Resin: 6.15kg Filler: 20.00kg Hardener: 2.51kg **Then broadcast with the required aggregate.**
Shelf life	Resin & Hardener: 12 Months Filler & Aggregate: 12 Months
Storage conditions	**Pumagrip HD 3** must be stored off the ground in original packaging, unopened and undamaged. The ambient conditions must be dry and between 10°C and 30°C with no direct sunlight. Protect from frost.

TECHNICAL INFORMATION *		
Adhesive strength to concrete	BS EN 13892-8	>2.0 N/mm^2

*The typical physical properties given above are derived from testing in a controlled laboratory environment. In the field results may vary due to site conditions.

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Resin Development

APPLICATION INFORMATION

Mixing Ratio	MIX FULL UNITS
Consumption	1.8 kg/m^2 per mm thickness. Minimum 2.0 mm thickness.
Environmental Conditions	Air Temp +15°C to 25°C Relative air humidity <75% Dew Point >3°C above
Substrate Temperature	+10°C to 25°C
Substrate Moisture Content	No ponding water Substrate relative humidity (RH): <75% Concrete must have a tensile strength: >1.5 N/mm^2
Pot life (approx.)	+10°C 45 minutes +/- 5 minutes +20°C 30 minutes +/- 5 minutes +30°C 20 minutes +/- 5 minutes
Curing Schedule 20°C	Light Pedestrian Traffic Above 48 hours Light Wheeled Traffic Above 4 days Full Chemical Resistance 7 days

APPROVALS & STANDARDS

Synthetic Resin Screed material according to EN 13813:2002

Resdev Limited, Pumaflor House, Ainleys Industrial Estate
Elland, West Yorkshire, HX5 9JP, England

CE	13	DOP RV0043

EN 13813 SR-B2,0
Synthetic resin screed material for use internally in buildings not subject to reaction to fire regulations

Reaction to fire:	NPD		Impact resistance:	NPD
Release of corrosive substances :	SR		Sound insulation:	NPD
Water permeability:	NPD		Sound absorption:	NPD
Wear resistance:	NPD		Thermal resistance:	NPD
Bond strength:	B2,0		Chemical resistance:	NPD