

REF: 4018.20DS
 Issued: 12th May 2021

LEESON GRIP 3-1VHB (PU4018/20) High Friction Road Surfacing System For Metals and Roads

DESCRIPTION

LEESON GRIP PU4018/20 is a three-component solvent free urethane system which when used with, for example, 3-5mm aggregate gives a High Friction Anti-Skid surface.

Urethanes cure rapidly especially at low temperatures allowing earlier opening of sites to traffic. This is a significant advantage when application is made at night when temperatures are low.

APPLICATIONS

Typical surfaces include roads, pedestrian crossings, cycle paths, bridges, walkways, stairs, car park decks, ramps, flooring, airport runways, etc.

The main product advantages are:

- Rapid Setting – ability to increase the product speed.
- Anti-skid surfaces with high SRV's
- Excellent fuel and chemical resistance
- High viscosity allows thicker coating applications
- Waterproofing for substrate protection
- High Thermal Tolerance (-20°C to +120°C)
- Solvent free – nonflammable.

The system is available in a range of colours which are available as pre weighed additions.

TYPICAL SPECIFICATION

	LEESON GRIP 3VHB-1 (PU4018/20) Part A Resin	LEESON GRIP 3VHB-1 (PU4018/20) Part B Hardener	LEESON GRIP 3VHB-1 (PU4018/20) Part C Filler
Colour:	Black*	Brown Liquid	Powder
Density:	0.956 g/cm ³	1.236 g/cm ³	N/A
Solids:	100%	100%	100%
Mixing Ratio	2.38	1	60:40 Blend: PU
Viscosity at 23°C:	3,300 ± 800 mPa.s	150 ± 80 mPa.s	N/A
Mix Viscosity:	2,400 ± 500 mPa.s		
Pot life at 19°C:	20 ± 3 minutes		

*Other colours available.

POLYMER TECHNICAL SPECIFICATION

Parameters	Range	Standard
Binder Tensile Strength (28 Days)	>6 N/mm ²	BS2782 part 3 methods 320A-320F
Binder Elongation (28 Days)	>15%	BS2782 part 3 methods 320A-320F
Binder Hardness (48 hrs)	>90 (Shore A)	LPU STM 9
Compressive Strength	>5 MPa	BS 4370 Part 1
Adhesion to Primed Steel	>5 N/mm ² (failure did not occur at the interface. PU cured for 4 days)	LPU STM 147

SURFACE PREPARATION

Bituminous Surfaces

The road surface should have a texture depth of between 0.5mm and 2.0 mm as determined by the sand patch test.

All imperfections in the road surface should be repaired prior to laying the product.

The surface to be treated must be clean, free from frost, ice and road salt. The surface should also be sound, dry and free from dust and any loose material. Any visible oil should be removed with a detergent solution, flushed with water and the surface allowed to dry.

Other methods of cleaning the road include grit blasting, high pressure jet washing, low pressure water/abrasive cleaning scarifying and scabbling. Dust and loose surface material can be removed by brushing or treated with hot compressed air. This will also remove any surface moisture.

We also have available a cementitious scratch coat system (D5126), for filling porous asphalt to reduce topcoat consumption. Please consult our Technical Data Sheet for D5126 for further information.

Any areas which are not to be treated are to be masked with a suitable tape.

Concrete and timber

Concrete is to be hot compressed air blasted then primed with primer no.10 PU3922 (see individual data sheet for more information) and this allowed to cure for a minimum of 2 hours and maximum of 12 hours before applying the finish coating. On timber, the surface should be primed with primer no.10 (PU3922) and conditioned as above.

Steel

It is to be shot blasted to SA2.½, ~60-70 micron surface roughness, or scabbled to remove the surface of the steel. The steel should then be primed, within 2 – 3 hours of shot blasting, with PU5015, and allowed to cure for minimum 3 hours, maximum 23 hours before application of the LEESON GRIP PU4018/20. For optimum performance the resin should be applied to a primed surface which is less than 15 hours old.

MIXING AND APPLICATION

The surface must be free from contamination or water prior to application, as such cleaning/drying may be required. LEESONGRIP PU4018/20 should be applied at 10°C-35°C ground temperature and 10°C-35°C ambient temperature. The relative humidity should be between RH 30-85%. The system should be applied at least 3°C above the dew point measured for the application surface.

DO NOT USE IN TEMPERATURES BELOW 5°C

1. LEESONGRIP PU4018/20 Part A (resin) component well before addition of B and C component.
2. Add 1 part by weight of LEESONGRIP PU4018 Part B (hardener) to 2.38 part by weight of LEESONGRIP PU4018/20 Part A (resin) and mix until a mass of uniform colour is obtained.
3. Add LEESONGRIP PU4018 Part C (filler) and mix until uniform.
4. The surface is then coated with the blend within 10 minutes (at 20°C) at a coverage rate of 4-5 kg per m² (dependant on surface porosity). The resin should then be allowed to self-level to give total coverage.
5. The non-slip aggregate (moisture content less than 0.4%) is then scattered over the resin within 5 minutes (at 20°C) excess aggregate can be removed after 2 hours or when the resin has cured sufficiently.
6. The site can be reopened to traffic after 4 hours, depending on ambient temperature, or when the binder is hard to the touch.

STORAGE

Store in unopened original containers.

LEESONGRIP PU4018/20 Part A and Part B will have a shelf life of 14 months.

Optimum storage temperature 10°C to 35°C

Once opened, containers of LEESONGRIP PU4018 Part B should be used within 14 days.

Packaging: 25Kg kits = Part A 7.04kgs, Part B 2.96kgs, Part C 15kg.

HEALTH & SAFETY

LEESONGRIP PU4018/20 Part A (Resin) is not classified as a dangerous substance; however, the wearing of goggles and gloves is to be recommended.

LEESONGRIP PU4018 Part B (Hardener) contains a non-volatile isocyanate. Avoid prolonged contact with skin. In cases on contact with eyes, flush out with excess water and seek medical attention. Wear goggles.

Before use, ensure that you have read Health & Safety Data Sheets for this product.

The Company will supply, upon request, individual advice in writing in connection with the use and application of its products in all appropriate cases. Customers are urged to make use of this service. This leaflet is provided for general guidance only. All recommendations and suggestions are made in good faith but without guarantee and are subject to the Company's terms and conditions.