

FLOORBOND PU

High Build, Chemical Resistance PU Flooring



SCRATCH COAT



TOP COAT



PRODUCT DESCRIPTION

FLOORBOND PU is a self-smoothing polyurethane resin flooring system with outstanding wear and chemical resistance, ideally suited in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Food, Pharmaceutical and general heavy duty plant and Traffic areas are just some of the environments that can benefit from the tough chemically resistant system. FLOORBOND PU can be installed from 2 mm up to 6 mm thickness.

USES

- Chemical Storage Plants
- Processing Industries
- Food Industries
- Plant Rooms
- Laboratories
- Warehouses
- Industrial Manufacturing Zones
- Pharmaceutical manufacturing
- General heavy duty Plant and traffic areas

FEATURES & ADVANTAGES

- Chemical Resistance
- High Impact Resistance
- Food grade
- Easy to Clean
- Hard-Wearing

- Low odor
- Hygienic
- Available in range of colour

APPLICATION METHOD

PRE-TREATMENT

The substrate should have a surface tensile strength of at least 1.5 N/mm². FLOORBOND PU can be applied on 7 days old concrete or 2 days old polymer screeds. The concrete substrate must be hard, sound, free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, oil, grease, wax, polish etc., that will inhibit adhesion to the substrate. Contaminated concrete surfaces should be mechanically prepared, either by scabbling, grinding or contained shot blasting equipment or similar, and be vacuumed clean prior to installing FLOORBOND PU. Overwatered or otherwise weak concrete surfaces must also be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment.

Note:

Any joints or cracks in the concrete base where differential movement is anticipated e.g. movement joints, should be brought through to the finished surface and suitably sealed. To ensure maximum bond, grooves must be cut into the perimeter of the sub-floor, typically 8 mm deep by 8 mm wide. These should be inset approximately 100 mm from and running parallel with the walls, columns and adjacent to doorways etc., including any finishing edges and day joints. Joints are also required wherever movement is expected including adjacent to stainless steel channels and machine bases. The grooves must have clean, square edges and the product laid into the full depth of the groove forming a perimeter anchorage. Grooves should surround areas not exceeding 20 m².

MIXING

Before commencing, stir Part A and Part B individually. In a suitable mixing vessel, pour Part A and start mixing with a slow speed drilling machine fixed with a mixing paddle, add Part D (pigment) minimum for one minute then add Part B and continue mixing. Finally add Part C and mix together for minimum 2 minutes to obtain a homogeneous mix. One or more packs may be mixed at the same time in order to maintain a quick rate of installation.

SCRATCH COAT

A 1mm scratch coat of FLOORBOND PU is applied to ensure the substrate is completely sealed. Mix FLOORBOND PU and pour onto the floor and spread thinly using a straight edge trowel. Scratch off the excess with the edge of the trowel and leave to cure for 16 hours or overnight.

APPLICATION

FLOORBOND PU Should be poured onto the prepared and primed substrate and spread using a trowel to achieve the desired thickness. As soon as the product has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to provide an even surface appearance and to release any trapped air. Do not re-roll later. The work area should be protected during the installation process and during the initial curing time to ensure that no airborne debris can contaminate the surface of the wet resin as this will lead to unwanted

blemishes in the hardened, cured surface. All movement joints in the sub-floor must be carried through the topping and properly sealed. Construction joints and cracks not subject to movement may be overlaid but should the floor move in any way, these defects will reflect through the system. Isolation joints will need to be allowed for in areas where high thermal movement is anticipated, e.g. around ovens and freezers.

CLEANING

All tools and equipment should be cleaned immediately after use with Highbond thinner. Hardened material can only be removed mechanically.

TECHNICAL DATA

PHYSICAL PROPERTIES	RESULTS		
Density	1.87 g/cc		
Pot life	15 - 20 mins		
Impact Resistance	16 Nm (EN ISO 6272)		
Service temperatures	-25°C to +60°C (at 2mm Thickness)		
Abrasion Resistance Taber Abrader - (1 kg load using CS17 wheels)	0.11g loss per 1000 cycles		
Slip Resistance	Dry >40 (BS 7976-2)		
Compressive Strength	>48 N/mm ² (EN 13892-2)		
Flexural Strength	>18 N/mm ² (EN 13892-2)		
Tensile Strength	>8 N/mm ² (BS 6319)		
Bond Strength	>1.5 N/mm ² (ASTM D 7234)		
Chemical Resistance	Excellent Chemical Resistance		
Shore D Hardness	85 (ASTM D 2240)		
Speed of Cure	10°C	20°C	30°C
Light Traffic	36 h	24 h	12 h
Full Traffic	72 h	48 h	24 h
Full Chemical Cure	10 d	7 d	6 d

CHEMICAL RESISTANCE

FLOORBOND PU is resistant to wide range of liquids and chemicals like most dilute acids (Acetic, Oleic, Citric, Hydrochloric, Nitric and Sulphuric acid), Milk, Animal fats and Vegetable oils, Sugars flavourings, Essences, Mineral oils, Kerosene, Petrol, Mineral Spirit, Brake fluids, Detergents etc. Chemical spillages should always be wiped up as quickly as possible and not be allowed to concentrate up by evaporation.

Chemical	Concentration Results in %	Results
2 Ethoxy Ethanol	100	N
Acetic acid	10	R
Acetic acid	50	L
Acetic acid	99	N
Acetone	100	N
Ammonia	30	R
Beer	100	R
Butan-2 one Extra pure	100	N
Citric acid	50	R
Coffee	100	R
Diesel	100	R
Ethyl Acetate Extra pure	100	N
Ethyl Alcohol (Ethanol)	100	N
Formic Acid	98	N
Formic Acid	50	L
Guava Juice	100	R
Hydrochloric acid	35	L
Hydrochloric acid	25	R
Hydrogen peroxide	25	R
Kerosene	100	R
Lactic Acid	25	R
Lemon solution	100	R
Mango Juice	100	R
Methanol	100	L
Milk	100	R

Chemical	Concentration Results in %	Results
Nitric acid	30	L
Nitric acid	50	N
Oleic Acid	100	R
Orange juice	100	R
Papaya Juice	100	R
Petrol	100	R
Pomegranate Juice	100	R
Red wine	100	R
Sabeena solution	100	R
Sambar	100	R
Satu salt sol.	100	R
Satu. sugar sol.	100	R
Sodium Hydroxide	50	R
Hypochloride sol.	100	R
Sodium Hypochlorite	15	R
Sulphur dioxide sol.	100	N
Sulphuric acid	25	R
Tartaric Acid 80%	80	L
Tea	100	R
Toluene	100	N
Tomato Juice	100	R
Vegetable oil	100	R
waste oil	100	R
Xylene	100	L
Sambar	100	R

R-Resistant

L-Limited Resistance

N-Not Resistant

COVERAGE

Approx. 5.38 m² when applied at a thickness of 2mm (20 Kg Pack)

PACKAGING

20 kg

Part A (Resin) - 2.45 kg

Part B (Hardener) - 3.10 kg

Part C (Filler) - 14.20 kg

Part D(Pigment) - 250 g

STORAGE AND SHELF LIFE

FLOORBOND PU Part A, B & C has a shelf life of 6 months & Part D has a shelf life of 24 months if kept in a clean, dry store between 5°C and 30°C in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

PRECAUTIONS

During mixing and Application the following precautions should be observed: Ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water. Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

NOTE

extensive experience and is given in good faith in order to help. The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products. However, as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

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