

Self-Leveling Polyurethane Flooring.

3-6 mm FOUR component, polyurethane cementitious self-leveling finish

FEATURES

- Monolithic
- Fast return to service
- Good heat resistance
- Resistance to wide range of chemicals
- Suitable for application in the Food, Beverage, Bakeries, Dairies, Pharmaceuticals, and other chemical industries

TECHNICAL DATA

Colour	Self-standard Shades (Grey)
Finish	Smooth Matt finish
Recommended DFT/ Coat	3-4 mm
Theoretical Covering Capacity	0.19 sq.mtr/ kg @ 3 mm DFT 0.14 sq.mtr/ kg @ 4 mm DFT
Drying Time	Surface Dry: 4.5 hours Hard Dry: 18 hours Full Cure: 7 days
Mixing Ratio (by weight)	Base: Hardener: Aggregate: Colorant 14.5 : 15.5 : 68.5 : 1
Pot life	10-15 minutes @ 27°C

MECHANICAL / PHYSICAL PROPERTIES

Compressive Strength (ASTM C 579)	55Mpa
Flexural Strength (ASTM C 580)	15 MPa
Tensile Strength (ASTM C 307)	6 MPa
Abrasion Resistance, (ASTM D 4060)	120 mg loss per 1000 cycles (1 Kg load using CS 17 wheels)
Pull up Adhesion on Concrete (ASTM D 4541)	> 1.5 MPa, Concrete failure
Slip Resistance (Pendulum test)	Classified "Moderate" under BS EN 13036- 4:2011
Shore D Hardness, 24 hours (ASTM D 2240)	80
Surface Resistivity (ANSI / ESD 2020)	2.5x10 ¹¹ ohms

The data given is for guideline only. The physical values are subject to normal manufacturing tolerances, colour and testing variances. The coverage & consumption figures are theoretical and do not allow for any additional material required due to surface porosity, surface profile, variations in level or wastage etc.

The actual drying time/ overcoat interval may be shorter or longer, depending on film thickness, ventilation, humidity, temperature etc. The information provided above is at 30°C and 65% relative humidity.

APPLICATIONS INSTRUCTIONS

- Concrete substrates must be sound and of sufficient compressive strength (minimum 20 Mpa) with a minimum tensile strength of 1.5 Mpa.
- A sound, clean and dry substrate is essential for successful coating application and ensuring maximum bonding between the substrate and coating system.
- The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. and have a moisture content less than 5% prior to application of the primer cum scratch coat.
- Ensure that the substrate does not suffer from rising moisture and potential osmosis problems.

SURFACE PREPARATION

New Concrete Floors:

Should be at least 28 days old or have a moisture content of less than 5% before proceeding with primer cum scratch coat application. Laitance and deposits on new concrete floors are preferably removed by vacuum assisted mechanical scarifier to achieve an open textured surface. Old Concrete Floors:

- Determine the general condition, soundness, presence of contaminants, presence of moisture vapour emissions and the best methods to prepare the surface to receive floor coating system. Mechanical surface profiling by grit or shot blasting, grinding, or scarifying are the preferred floor preparation methods on old concrete floors.
- Hydrophobic contaminants can be identified by a simple water drop test. Other contaminants can be identified by pH.
- Remove localized weak or deteriorated materials from the surface. Remove bond-inhibiting materials such as oils, grease, wax, fatty acids, and other contaminants. This can be accomplished by the use of detergent scrubbing, low pressure water cleaning (less than 5000 psi), steam cleaning, or chemical cleaning. Acids and alkalis can be removed by neutralizing to form a water soluble salt and then high pressure water cleaning and mopping it off to dry state.
- In the areas where the contaminants cannot be removed, complete removal and replacement of the contaminated surface is typically considered.
- Surface defects such as voids, bug holes, excess porosity, and physical and chemical damage are usually filled or repaired prior to the installation of the floor coating system. Materials such as slurries, mortars, and polymer concrete are used to level, smooth and patch concrete surfaces. High spots must be removed by scarification.

Note: Acid etching of the surface is not recommended as a preparation technique partly because of the implications for Health & Safety but also because the surface is left saturated with water and calcareous salts which may ultimately lead to debonding or osmotic blistering.

GROOVE OPENING

- Retaining grooves must be prepared to prevent curling of the screed during hardening and curing.
- Open grooves twice as wide and twice as deep as the screed thickness. Use a suitable double blade saw with connection to an industrial vacuum cleaner.
- Retaining grooves must be located in the perimeter and throughout horizontal surface of the application area and also around columns, plinths, drains etc. or any singular element that represents a discontinuity in the screed.

FLOOR JOINTS

- All cracks and construction joints present, based on the depth of the crack, should be filled with APCOFLORE PU CRETE 4K after primer cum scratch coat application.
- The expansion joints should not be overcoated with the coating and to be addressed with suitable material.

PRIMING

- Primer cum scratch coat: Mix base, hardener and aggregates of APCOFLORE PU CRETE 4K in the ratio of

13:16.5:69.5 :1 by weight, stir well with high-speed electric paddle until uniform mass is formed. Apply the scratch coat by means of putty knife or flat trowel.

- Freshly applied primer cum scratch should be protected from damp, condensation, and water for at least 24 hours.

MIXING

- APCOFLOOR PU CRETE 4K flooring is supplied in 4 pre-weighed packs (Base, Hardener, Aggregate, Colorant) which are ready for immediate on-site use. Part mixing of these components is not acceptable and will affect both performance and appearance of the finished floor.
- A suitable power-driven mixer such as a bucket mixer is recommended for uniform mixing of the screed material. Stir the base and hardener separately. Blend the aggregates in the bag. Mix hardener gradually into the base under continuous stirring. Mix the aggregates into the mixed resin portion uniformly under continuous mechanical agitation.
- Mix well for 2-3 minutes till the components become homogenous and apply before pot life.

APPLICATION

- The product may be applied by a serrated/ notch trowel to the required thickness. The entire mixed material should be poured onto the prepared and primed surface and spread slowly and evenly. To ensure proper levelling and appearance avoid overspreading. The laid material should be rolled firmly with a spike roller to ensure compactness and de-aeration of the film. Always wear spike shoes when rolling with spike roller. The rolling should be carried out using a 'back and forth' technique along the same path. An overlap of 50% with adjacent paths is recommended. Further light rolling may be required to remove surface imperfections, or for subsequent release of trapped air. This should be done prior to the setting of the product. To avoid roller marks, prevent over rolling of the coating.
- The coverage & levelling would vary significantly based on the nature & levelling of the concrete surface.
- Freshly applied APCOFLOOR PU CRETE 4K should be protected from damp, condensation, and water for at least 24 hours.
- At low temperatures, the chemical reactions are slowed down; this lengthens the pot life, open time & curing times. High temperatures speed up the chemical reactions thus the time frames mentioned above are shortened accordingly.

APPLICATION CONDITIONS

- Residual moisture content of the concrete substrate should not exceed 5%.
- No rising moisture & potential osmosis problems.
- APCOFLOOR PU CRETE 4K can be recommended for substrate application at 15° C to 25° C.
- Avoid working outdoors when raining, snowing or windy. Avoid application when substrate temperature is above 25°C. In such case late evening or early morning application is recommended. APCOFLOOR PU CRETE 4K should not be applied in direct sunlight or on to very hot substrate.
- Recommended ambient temperature for application is between 10°C - 35°C Relative Air Humidity (RH) to not exceed beyond 80%

STORAGE, MIXING and APPLICATION TEMPERATURES

- Material Storage Area 15°C to 30°C
- Mixed Material 15°C to 30°C
- Application area (Ambient) 10°C to 30°C
- Substrate Temperature 10°C to 30°C

Note: Detailed method statement will be provided before commencing the work.

CLEANING

All tools and equipment can be cleaned with Thinner T 141 immediately after use.

Note: APCOFLO R PU CRETE 4K should not be applied to asphalt, weak or friable concrete, unmodified sand/cement screeds, PVC tiles or sheet or substrates known to move substantially e.g. steel walkways. In common with all polyurethane materials some light shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.

PACK SIZE

19.9 Kgs (Base: 2.9 Kg, Hardener: 3.1 Kg, Aggregate: 13.7 Kg, Colorants: 0.2 Kg)

STORAGE

Shelf Life: At least 6 months if stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between 5°C to 35°C, subject to inspection thereafter.

REGULATORY INFORMATION

Flash Point: Base - Not less than 24°C; Hardener - Not less than 24°C
VOC: 90 gm/ ltr as per USA-EPA Method 24

SAFETY INFORMATION

- As a general safety measure, inhalation of solvent vapours or paint mist and contact of liquid paint with skin & eyes should be avoided. Forced ventilation should be provided when applying paint in confined spaces or stagnant air. Even when ventilation is provided, respiratory, skin and eye protection is always recommended while spraying paint.
- Please refer to our Material Safety Data Sheet prior to using the product.
- Disclaimer: To the best of our knowledge the information provided herein are true and accurate at the date of issuance. Since we have no control over the quality or condition of the substrate or the various factors affecting the use and application of the product, we do not accept any responsibility or liability arising out of use of the product. The company reserves the right to modify data contained herein without prior notice. Any change in data would normally be followed by issue of a new data-sheet. The user should check with the nearest sales office of the company and confirm the validity of the information, prior to using the product.

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