

Waterproofing



SMARTCARE FLEXISEAL PU

Single component Liquid Cold Applied Elastomeric Waterproofing Membrane

Description

SmartCare Flexiseal PU is a Pitch modified PU which cures by reaction with atmospheric moisture and forms a seamless highly elastic membrane for all below and above the grade waterproofing specifications.

It is designed with a high solid content which gives a high film build up and has a good adhesion to wide range of cementitious and masonry substrates. Due to its liquid application nature it can be applied to all substrates which exhibit high detailing.

When fully cured SmartCare Flexiseal PU forms a permanently flexible waterproof lining to most building surfaces including reinforced concrete, block works, brick works, cement render, plaster board and fiber reinforced cement. The properties like high elasticity, very good crack bridging and impermeability to water vapor make it capable of effectively waterproofing even in most demanding conditions. It is an advanced state of water proofing system and offers tangible, cost saving benefits over conventional sheet and bitumen based systems.

Uses

SmartCare Flexiseal PU can be used for a wide range of waterproofing applications

- Roofs, Basements and Foundations
- Tunnels and bridges
- Terraces and Balconies
- Car Decks, Plaza Decks, Planter Boxes
- Swimming pools, water storage tanks, pier, Retaining Walls
- Internal Wet Areas (kitchens, bathrooms) etc.
- Sewages works and tanking applications in areas where aggressive ground water conditions prevail.

Characteristics

- Single component ready for use
- Does not create mess and objectionable odor like bitumen based materials
- Excellent elasticity, allows expansion and contraction with the substrate, without brittle
- Excellent chemical resistance
- High thermal stability which eliminates melting and flowing at high temperature
- Excellent workability
- Excellent adhesion to wide range of construction materials

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- Provides a continuous, seamless waterproofing membrane
- Easy to repair

Properties

Colour	Dark Brown/ black
Application temperature range, °C	5 to 50
Density @ 25°C, g/cc ASTM D 1475	1.46 ± 0.02
Solid Content, % approx. ASTM D 2939	86 ± 2
Touch Dry time @ 25 °C, 50% RH	15 – 24 Hrs
Full Cure @ 25 °C, 50% RH	7 days at 1.3mm thickness
Elongation at break, % ASTM D 412	600 - 900
Tensile strength, N/mm ² ASTM D 412	1.3 – 1.5
Swelling in water	Nil
Hardness Shore A	30 - 35
Low temperature flexibility crack bridging ASTM C 836	No cracking
Tear Resistance, N/mm	10 - 15
Service Temperature range, °C	40 to +70

Coverage

1mm thick : 1 m²/ltr

Packing

20 Ltr

Standards

Confirms to BS 1881, BS 6319 part 3, BS 6319 part 7, ASTM C 579

Application Conditions

Substrate Temp : + 5 to + 50 °C

Ambient Temp : + 5 to + 50 °C

Application Data

The performance and ultimately the durability of the coating largely depends on the condition of the substrate on which it is coated on. Therefore, conditioning and preparation of the substrate is of utmost importance prior to the application of the coating.

Surface Preparation:

- Inspect the surface conditions
 - The concrete surface should be levelled, tough and should not have hollow areas or pot holes
 - Check hollowness by hammering and repair such areas as well as pot holes using polymer modified cement
 - sand mortar
 - Allow to cure for at least 72 hours before application
- SmartCare Flexi Seal PU Clean surface so that it is free from loose dust, particles, oil etc. by brooming or vacuum cleaner. Check moisture of the surface, it should be less than 5%.

Priming

Priming is not recommended in case of sound masonry/cementitious substrate conditions. In case of high absorption or porosity, prime the surface with self-priming coat of SmartCare Flexiseal PU, by 40 % diluting with Solvalux 7-25 thinner by brush or roller (Coverage of 12 sq. m./ltr). Allow it to dry for 4 - 6 hours till it becomes tacky. For extra smooth surfaces lightly grind the surface to make it rough and abrasive.

Crack and joint filling

All structural cracks and expansion joints should be filled and sealed with SmartCare Unyverseal PU Sealant as per recommended application procedure and site specifications. When cured, a 200 mm wide layer strip of SmartCare Flexiseal PU should be applied centered over all sealed joints. While the membrane is still wet, cover with a correct cut stripe of fiber mesh and press it to soak. Saturate the fiber mesh with another coat of SmartCare Flexiseal PU until it is fully covered. Allow curing before applying the waterproofing membrane

Application

SmartCare Flexiseal PU can be applied with the help of a brush, roller, airless spray and trowel or rubber squeegee. For horizontal surface, it is recommended to apply

mended. SmartCare Flexiseal PU can be applied in one 1 mm or two 0.5 mm application layers. Two application layers are recommended on uneven and jointed surfaces to minimize the possibility of thin patches, missed areas and pin holing. Also sloping or vertical surfaces, will only accept 0.5 mm per application layer.

In the case of two-layer application, it is important to do the second application layer within 24 hours of the first application layer becoming sufficiently cured to allow operator access. Application of 1 liter / mon a smooth flat surface will provide an adequate DFT of approx. 1 mm. Any surface texture will increase the surface area which must be allowed for when calculating usage e.g. on a chipping embedded surface the actual area will be approximately doubled.

Repairs

Minor damage to the film can be repaired by removing loose membrane; cleaning the surrounding area with Solvalux 7-25 thinner; overlapping by 150mm; priming the area with SmartCare Bitushield Primer SB, and finishing with two application layers of SmartCare Flexiseal PU.

Flood Test

Prior to placement of protection, flood to a minimum depth of 50 mm of water for 24 hours. Drains shall be plugged and barriers placed to contain the water. Flood test needs to be done after 7 days of application of Flexi Seal PU

Cleaning

Solvalux 7-25 thinner should be used to clean equipment etc

Post application protection

After the application of SmartCare Flexiseal PU the film should be allowed to cure for at least 72 hours. For horizontal application protection place a loosely laid geotextile film of 250 GSM over the SmartCare Flexiseal PU film. Screed to slope (M20 grade). For vertical application protection before backfills etc. plaster screed or protection board should be used. The SmartCare Flexiseal PU film should never be left open to sky.

Spray Application

Only airless spray should be used Graco King 60: 1 ratio or similar, Compressor: - 100psi, 60cfm min, Tip Size: - 28-30 thou 50° Angle

Handling Precautions

SmartCare Flexiseal PU contains bitumen and a small amount of solvent. Avoid smoking, hot lights, naked flames or creating sparks. As a precautionary measure

SmartCare Flexiseal PU in the thickness of 1 mm to 2 mm DFT (Dry Film Thickness), lower thickness is not recom-

and to avoid sticking to hands & skin, it is recommended to use gloves and safety goggles. In case of contact with

human skin wash the affected area with plenty of fresh water immediately. Seek medical assistance immediately in case of any allergy or criticality.

Storage conditions/ shelf-life

Container packs should always be stored in dry and shaded areas. The product should not be kept exposed to direct sunlight and should not be kept near to any source of heat. The shelf life is 12 months if stored as per recommendations.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product. A thin layer of skinning is considered normal and will not affect the performance of the product.

Value Base

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods

Health and safety information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet.

Precautions

- Do not apply during rains or extreme temperatures
- Should not be applied at substrates with moisture level greater than 5% as measured by a recommended

moisture measuring instrument

- After opening the container minimum application life is up to 48 hours if stored in tightly closed container

Safety Features

Kindly refer to the MSDS which gives detailed information on safety measures while handling the product, which is available on request.

Store in a cool, dry place.

Keep out of reach of children and away from eatables.

May be harmful if swallowed. In case of ingestion seek immediate medical attention.

Eye protection during application is recommended.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of skin contact wash with soap and plenty of water. Get medical attention if irritation develops or persists. It is recommended to wear suitable nose pad during surface preparation.

Dispose as per recommendation mentioned above.

No added Lead, Mercury or Chromium compounds.

Note: The information supplied in our literature or given by our employees is based on extensive experience and, together with that supplied by our agents or distributors, is given in good faith 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 work, we accept no liability for any loss or damage which may arise as a result thereof.

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