EUCOFLEX PU 100

Water Based, Liquid Applied PU Elastomeric Waterproofing Membrane

EUCLID CHEMICAL

Description

EUCOFLEX PU 100 is a single component high build, thixotropic, emulsified modified with PU pre-polymers and synthetic rubber copolymer of the high performance Neoprene type. The fusion of PU pre-polymer and Neoprene rubber in modified emulsion imparts special properties to the product such as better elongation, recovery and cold flexibility.

Primary Applications

- Waterproofing structural wall, foundation walls, floor slabs, copings, footings, tie beams, ramps, retaining walls, etc.
- Waterproofing of swimming pools, reservoirs & landscaping decks, plantations, lift pits, bathrooms, kitchens and other areas subject to constant ponding/immersion.
- As a damp proof membrane for sandwich construction.
- Renovation and refurbishment of old waterproofing system including torch-on waterproofing membranes.

Features/Benefits

- Highly elastomeric (Up to 1000% elongation with excellent recovery), will accommodate structural movements and allow membrane to stretch with movement in the substrate.
- Excellent adhesion to both green and cured concrete.
- High build and thixotropic. Does not sag or flow when applied vertically.
- Single component, ready-to-use.
- Simple and easy application using roller, brush, squeegee or spatula.
- Excellent resistant to chloride, sulphates, mild acids, alkalies, oil, salts, common fuels, bacteria and to organic matter found in soil.
- Continuous monolithic (seamless) layer. Completely bonds to the substrate thus eliminating horizontal migration of water between substrate and membrane. This means fast location and inexpensive repair of leaks occurring below the damaged section of membrane, if any.
- Solvent-free no emission of dangerous fumes or vapours and no fire risk. Non-flammable and non-toxic in its cured state. Safe to use.

Technical Information

Appearance:	Dark greyish gel	**Flash Point:**	None
Colour:	Black when dry	**Service Temp:**	-20°C to 115°C
Density:	1.05 +/- 0.05	**Application Temp:**	10°C to 45°C
Solid Content:	65% by weight	**Coverage:**	1.0 to 2.0 Litre/m²
pH:	>9.0	**Full Cure:**	7 days
Viscosity @ 20°C:	Min.100 cp		

Touch Dry: 4 – 8 hours depending on membranes thickness, temperature, humidity and wind conditions

Recoatable Interval: Minimum 6 – 15 hours depend on coat thickness, temperature and humidity

Typical Properties on Product (Cured Film)

Test Item	Test Method	Test Result
Elongation at Break	ASTM D 412	Over 1000%
Softening Point	ASTM D 36	>120°C
Water/Damp Permeability	ASTM D 96	0.06 gr/m²/24 hours
Resistance to Water	ASTM D 2939	No Blistering
Cold Flexibility	ASTM D 1227	-5°C
Heat Resistance	ASTM D 1227	2 hours, 100°C, no flow, blistering or sagging
Adhesion to Concrete	In-house	>0.50 N.mm²

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Packaging/Yield

EUCOFLEX PU 100 is available in 20 litre and 200 litre open top blue / black drums (or) 20 litre white pail.

Shelf Life

12 months in original sealed container stored in a dry cool place under cover out of direct sunlight. Failure to comply with the recommended storage conditions may result in premature deterioration of the product.

Directions for Use

Surface Preparation: Concrete, mortar and stone surface must be sound, clean, free from frost, oil, grease, standing water and all loosely adhering particles and other surface contaminants. The surface must be prepared in such a way a to provide a clean, dry surface free of protrusions so that a continuous film of **EUCOFLEX PU 100** can be properly applied and will adhere firmly to the surface.

Chip off sharp protrusions with a "scotching" hammer. Clean surface with high pressure water. If, for any reason, water cannot be used for cleaning, scrub off dirt with a stiff plastic brush. Clean-up the dry loosened dirt with a vacuum cleaner or broom followed by a damp mop.

Metal Surface:

All metal surfaces receiving **EUCOFLEX PU 100** must be free from grease, oil, dust, traces of corrosion and water. Remove grease and oil with suitable solvent, wash down surfaces with clean water and allow to dry. Wire brush any corroded surfaces and apply zinc rich primer. If application is to mild steel, a metal primer is recommended.

Expansion Joint:

Fill level with surface of concrete with a suitable joint sealant (polysulphide or polyurethane) depending on the project specifications. Apply 50mm width strip of flexible self-adhesive tape. Where movement is expected between elements, treat as an expansion joint. Sharp corners as between parapets, concrete deck and junctions should be treated by placement of proprietary mastic at the corner as a fillet or prepare angle fillet.

Note: Where moisture is trapped in the surface to be treated, an approved venting system consisting of a perforated base felt together with vents shall be used in accordance with the manufacturer's application procedures.

Application Method: EUCOFLEX PU 100 is a thixotropic gel which can be applied with great ease on vertical or horizontal surfaces to achieve desired thickness of the damp proof/waterproof membrane.

Primer is not normally required on good quality concrete substrate. However, on very absorbent surfaces such as porous concrete, plaster, screed, cement board, block work, etc. apply priming coat consisting of four parts of water to one part of **EUCOFLEX PU 100** to the prepared surface and allow it to dry out completely prior to application of top coat. On other areas, surface should be dampened prior to application of **EUCOFLEX PU 100**.

All shrinkage and non-structural cracks should be pre-treated with a 1.0mm thick coating of **EUCOFLEX PU 100** extending at least 50mm on both sides of the crack. Right angels or corner should have angle fillets installed. Apply 0.50mm thick of **EUCOFLEX PU 100** on the corners, embed a 100mm width reinforcing polyester fibre, allow to cure, then apply the second coat of **EUCOFLEX PU 100** completely covering the reinforcement. Allow all repair and preparatory works to cure for at least 24 hours.

On completion of the preparatory work such as crack filling and angle fillet waterproofing, and subsequent curing of the preparatory repair works, commence general application of waterproofing with **EUCOFLEX PU 100**.

Always allow the final coat to dry out fully (around 24 hours) before applying protection courses, such as screeds or boards.

Recommended application rates are as follows:

Damp proofing membrane:	Good quality concrete: 0.75 litre/m^2
	Plaster, block work and other absorbent substrates: 0.6 – 0.8 litre/m^2
Waterproofing membrane:	1.0 – 1.6 litre/m^2
Sandwich membrane for floor:	1.0 – 1.6 litre/m^2

Theoretical coverage rate for an application of 1.6 litre/m^2 shall be approximately 1.0mm (1000 microns) dry film thickness (DFT). Due allowance should be made for determination of practical coverage rates at site. Always apply in two coats, in right angles to each coat. Allow the preceding coat to dry out fully.

In better tensile properties are anticipated on the coating system, use fibre reinforcement between first and second coats, all over the surface.

Clean Up

Clean all the tools and application equipment with water immediately after use. Hardened and/or cured material can only be mechanically removed.

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