EUCOFLEX PU 300

Liquid Applied, Hybrid Polyurethane, Elastomeric Waterproofing Membrane

EUCLID CHEMICAL

Description

EUCOFLEX PU 300 is an elastomeric liquid applied hybrid PU Acrylic based waterproof coating formulated to give long-lasting, maintenance free and superior waterproofing protection for concrete substrates. **EUCOFLEX PU 300** offered the most advanced waterproofing technology and guaranteed to provide long term performance and security for waterproof environment.

Primary Applications

Waterproofing or vapour barrier protection of:

- Foundation and basements
- Kitchens and bathrooms
- Exposed roof, domes, balconies, terraces
- Car park deck roof
- Inverted roof & sunken slabs
- Damp proof membrane for sandwich construction

Features/Benefits

- Chemical resistance: Resist deterioration from dilute acids & alkali, oil, salts, bacteria and common ground salts.
- Single component, ready-to-use
- Water miscible and solvent free
- Easy application using roller, brush, squeegee or air spray machine
- Excellent adhesion to green and cured concrete with elastic recovery
- Long term resistance to ponded water
- High elongation permits membrane to stretch with movement in the substrate
- Excellent crack bridging properties
- Excellent UV resistance

Technical Information

Appearance	Grey, White, Green and Black
Density	1.35 +/- 0.05
Solid Content	65 - 70% by weight
Flash point	None
Tensile strength (ASTM D412)	> 1.5 MPa
Elongation (ASTM D412)	> 500%
Shore A Hardness (ASTM D2240)	50 - 50
Water Permeability (BSEN 12390)	No penetration @ 5 bar pressure
Water Vapour Permeability (ASTM E96)	0.15gms/m²/24 hours
Crack bridging ability	1.0 – 1.5 mm
Low temperature flexibility (ASTM D1227)	-5°C
Resistance to Water (ASTM D2939)	No blister or re-emulsification

Heat Resistance (ASTM D5147)	2 hours, 121°C, no flowing, dripping, blistering or sagging
Adhesion in Peel (ASTM C794)	> 1.0 N/mm²
Abrasion Resistance	Good
Chemical Resistance (ASTM D543)	Dilute acids and alkalis, ground salts, sewage, chlorides, sulphates
Touch Dry	4 – 6 hours depending on coat thickness, temperature, wind conditions, humidity and substrate
Re-coat interval @ 35°C	Minimum 6 – 15 hours depending on coat thickness, temperature, wind conditions, humidity and substrate
Full cure	7 days for water ponding test
Minimum Thickness recommended	1 – 2 mm over concrete
Application Temperature	+5°C to 45°C (refer notes on hot weather application
Service Temperature	-5°C to 115°C

All tested & physical parameters value given are subject to a 5 – 15% tolerance factor.

Flowcrete Asia Sdn Bhd (366254-X)
Lot 37631 & 37632 Jalan 6/37A Taman Bukit Maluri
Industrial Area Kepong 52100 Kuala Lumpur Malaysia
Tel: +60 3 6277 9575 Fax: +60 3 6277 4645
Email: asia@flowcrete.com

Packaging

Eucoflex PU 300 is packaged in 20 kg pails.

Shelf Life

6 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.

Coverage

Recommended application rate are as follows:

- Waterproofing Membrane 2.0 – 3.0 Kg/m^2
- Sandwich Membrane for Floor 1.5 – 2.0 Kg/m^2

Theoretical coverage rate for a 20 kg pail is around 8.0 - 8.5 Sq.m. at 1 mm dry film thickness. For critical waterproofing application, 1.5 mm film thickness advised (three coat system with fibre glass reinforcement). Theoretical coverage rate only applies to a smooth and non porous substrate. When estimating practical coverage rates, it is normal practice to add 10 - 15% to the theoretical estimate to account for wastage and surface irregularities. Always apply in two coats, in right angles to each coat. Allow the preceding coat to dry out fully.

Directions for Use

Surface Preparation: Surface must be structurally sound, clean, dry and free from dust, grease, curing compounds, paint coatings and other loose debris. Surface should ideally have a “sand paper” profile roughness.
Concrete surfaces should have a slope of at least 1% to allow water run-off. Allow surface to be pressure-jet water washed and slightly moistened (free from surface water), before application of coating, especially in hot climates over 35°C.

If bond of **EUCOFLEX PU 300** to the substrate is highly critical or a poor quality substrate is anticipated, reinforce all over membrane with 50 GSM fibre glass or polyester fabric to increase tenacity, bond and performance.

All shrinkage and non-structural cracks should be pre-treated with a 1.0 mm thick coating of **EUCOFLEX PU 300** extending at least 50mm on both sides of the crack. Right angles or corners should have angle fillets installed with polyester or fibreglass reinforcement mat. Allow all repair and preparatory works to cure for at least 24 hours prior to application of waterproofing system.

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 manufacture’s application procedures.

Priming: Normally **EUCOFLEX PU 300** can be applied directly onto clean damp concrete surfaces. For porous concrete surfaces apply a primer coat produced at site by diluting **EUCOFLEX PU 300** 1:4 with clean water, apply the rate of 4 – 5 m2 per Kg and allow to fully dry prior to over coating with **EUCOFLEX PU 300**.

Application Method: EUCOFLEX PU 300 can be applied by trowel, brush, short haired pile roller or sprayed using and airless sprayer. Mix for 2 – 3 minutes with a mechanical drill fitted with a proprietary paddle prior to application so that a homogenous mix is achieved. Application should commence immediately after mixing.

Allow first coat to dry out prior to second coat application. The second coat should be applied in the opposite direction (right angles) to the first coat as this will allow the polymer in the mix to be distributed more uniformly. Always allow the final coat to dry out fully before applying protection courses such as screed or boards. Allow full cure of 7 days before subjecting the waterproofing system to actual service conditions.

If better tensile properties are anticipated on the coating system, use polyester or fibreglass reinforcement between first and second coats, all over the surface to be waterproofed. To ensure compliance to standards, minimum dry thickness of 1.5 – 2.0 mm recommended.

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Clean Up

Clean all the tools and application equipment with water immediately after use. Hardened and/or cured material can only be removed with White spirit, Xylene or similar solvent.

Precautions / Limitations

- Do not apply the coating on dusty, porous substrates without priming. Porous surface should rendered with 1:2 cement sand screed and primed as noted above.
- Provide adequate ventilation when installing in confined areas or spaces, so as to allow the produce to cure fully.
- Do not let the coated areas into service (or) water ponding test, before full cure of 7 days after the 2nd (or) 3rd coat application is achieved.
- On exposed areas, slight discolouration of light colours can be anticipated.
- To reduce unwanted blistering (formation of bubbles) or cratering effect after application, ensure that the substrate is well primed, allowed to dry and subsequently multiple layer thin coating applied rather than in thicker coat application. This process will greatly reduce bubbling effect.
- Eucoflex PU 300 is waterproof coating, but not a trafficable coating. Only flat soled rubber shoes should be worn during applicationand during service.
- If the pail is opened for application, use all contents of pails on same day.

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