

## DURAFLEX PU

### Elastomeric Polyurethane Liquid Applied Waterproofing Membrane

#### Description

DURAFLEX PU is a solvent free liquid-applied, highly permanent, elastic, cold applied and cold curing, one component polyurethane membrane, used for long-lasting waterproofing. DURAFLEX PU cures by reaction with ground and air moisture and provides excellent mechanical, chemical, thermal and UV resistance properties so that the membrane can be kept direct exposed to sun and can be covered for

#### Areas of Application / Uses

- Waterproofing of Concrete & Metal Roofs (Exposed & Non-Exposed).
- Water proofing of Podiums, Roof Gardens & Planter Boxes (Protected with Screed).
- Waterproofing of Wet Areas in Bathrooms, Kitchens, Balconies.
- Water proofing of flashing, roof edgings, gulley's, steeply pitched designs, etc.
- Water proofing of external plastered walls, sunshades (chajjas), parapet walls, etc.
- Water proofing of new surfaces as well as for the repairs of old surface.
- DURAFLEX is optimally suitable for application on structures having complicated geometry like domes, arches, shells, folded plates, sandwich panels, corrugated sheets, etc.

#### Characteristics & Advantages

- Simple application (roller or airless spray)
- When applied polymerizes and forms a seamless, waterproofing membrane without joints
- Resistant to water and frost. Leaves no bare spots or puddles
- Provides resistance to root penetration (green roof application)
- Crack-bridging up to 2 mm thick, even at 14 °F (-10 °C)
- Provides water vapor permeability (allows the substrate to “breathe”)
- Provides exceptional surface adherence without any additional anchoring
- Excellent resistance to weather and sunlight (UV radiation)
- Maintains its mechanical properties over a temperature span of (-20 °C to 80 °C). No seasonal softening or hardening occurs
- The waterproofed surface can return to service
- The membrane can be easily repaired locally within minutes, in case it gets mechanically damaged.
- Economical

## Technical Data

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Property	Typical Value	Test Method
Nature of Liquid PU	1 Component	-
Colour	White, Grey	-
Specific Gravity	1.25 ± 0.05	ASTM D 792
VOC	Max. 20 gram Per Ltr	ASTM D 3960
Tensile Strength	3 N/mm <sup>2</sup> ±10%	ASTM D 412
Elongation at Break (%)	675 ±10%	ASTM D 412
Crack Bridging (For >2mm thick coating)	>2mm	ASTM C 1305
Adhesion to Concrete	>2.50 N/mm <sup>2</sup>	ASTM D 4541
Tear Resistance	Up to 20 N/mm	ASTM D 624
Shore "A" Hardness	>70	ASTM D 2240
Resistance to Water Pressure	No leak - 1 meter Column	DIN EN 1928
Water Absorption	<0.40%	ASTM D 6489
Water Vapor Transmission	>5.0 gr/m <sup>2</sup> /24hrs.	ASTM E 96-95
Thermal Resistance (80°C, 100 days)	Passed	EOTA TR-011
Service Temperature	-20°C to +80°C	-
Shock Temperature (Short Time)	Up to 200°C	-
Solar Reflective Index (SRI)	>95%	ASTM E 1980
Resistance to Root Penetration	Yes	EN 13948
Tack Free Time	4-6 Hrs	-
Re-coat Interval	12-18 Hrs	-
Light Pedestrian Traffic Time	24 Hrs	-
Full Cure	7 days	-

The information given in this Technical Data Sheet reflects typical median properties based on laboratory test, and practical experience; subject to the tolerance levels of EN, DIN & ASTM directives. However, as the product is often used under conditions beyond our control, we can't warrant but the product itself. This publication automatically supersedes all previous publications relating to this product.

### Safety:

Non-hazardous. If ingested, seek medical advice.

### Shelf Life & Storage:

Minimum 12 months in unopened container. Store away from sunlight and preferably below 42°C.

### Packing:

DURAFLEX is available in 20kg Pail.



## Application Instructions:

### Surface Preparation:

Careful surface preparation is essential for optimum finish and durability of the Liquid Applied Membrane. Surface should be free from oil, grease, and loose particles. In case of metal surface, remove rust and contamination for better protection, If the surface has been already treated with asphalt or bitumen coatings or roofing's felt sand any blisters, peel-off traces, loose laying, etc. which may harmfully affect the adhesion of the membrane, must be cut away and be properly filled.

### Repair of Cracks and Joints:

Treating the existing cracks and joints before the application is extremely important for long lasting, durable waterproofing system. Clean concrete cracks and hairline cracks, of dust, residue, or other contamination. Apply prime coat of **DURAFLEX** (dilute as per surface condition) by brush, spray or roller and allow 2-3 hours to dry. For cracks >3mm, fill all prepared cracks with suitable PU sealant. Then apply a layer of undiluted **DURAFLEX**, required width centered over all large cracks and while wet, cover with a correct cut stripe of the Geotextile Fabric well placed and soaked. Apply **DURAFLEX** coat over the Geotextile until it is fully covered. It is very important to ensure each coat is totally cured before the next coat is applied.

Clean concrete expansion joints and control joints of dust, residue, or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1.

### Priming:

Prime absorbent surfaces like concrete, cement screed with **DURAFLEX** (dilute as per surface condition) by roller or spray and allow it to cure fully. The curing time depends on the site conditions and ambient temperature.

### Waterproofing Main Coat:

Prior to application, stir **DURAFLEX** thoroughly in order to achieve a homogeneous mix. Pour the **DURAFLEX** onto the primed surface and lay it out by roller or brush, until all surface is covered. For large roofs, airless spray can be used allowing a considerable saving of manpower and time. After 12-18 hours curing apply another layer of the **DURAFLEX**. Do not spoil the dry surface while walking on it for application. For Termination and detailing at critical areas, like wall-floor connections, chimneys, pipes, cold joints and waterspouts, etc, reinforce always with the Geotextile Fabric. Water ponding test shall be done only once the coating is fully cured. **Coverage:** 1.2 – 2.0 kg/m<sup>2</sup> total consumption when applied in multiple layers over a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption, please contact the manufacturer for more information.

**Note:** For best results, the temperature during application and cure should be >5°C and <40°C. Material should be applied within the workable time and full curing may take up to 7 days depending on temperature and humidity. Low temperatures slow curing process while high temperature speed up curing.

Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any coating work. Installing the coating either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coat in the late afternoon or evening.

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