

BPU 10H (1K)

WATERBORNE POLYURETHANE LIQUID 1K MEMBRANE FOR WATERPROOFING AND PROTECTION

APPLICATION SURFACES

BPU 10H can be successfully applied on:

* Asphalt.
* Bituminous, EPDM, PVC membranes.
* Concrete.
* Thermoplastic Olefin (TPO)
* Fibrous Cement.
* Wood.
* Asbestos.
* TOT, Corroded metal, Galvanized Steel
* Old (but well adhered) acrylic & bitumen coats.
* Mosaic tiles.
* Cement roof tiles.

COVERAGE

In 2 coats (minimum total consumption 1.20 - 1.70 kg/m²)

- First coat : 0.60 - 0.80 kg/m²
- Second coat : 0.60 - 0.90 kg/m²

This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter coverage.

SUBSTRATE PREPARATION

Clean the surface, using jet water if possible. Remove oil, grease and wax contaminants. Cement laitance, loose particles, mold release agents, curing membranes must be removed. Fill surface irregularities with adequate products. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed.

JOINTS PREPARATION

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. Apply some PU Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of BPU 10, 200mm wide centered over and inside the joint. Place the fiber-seal fabric over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough BPU 10H. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with PU sealant. Do not cover. Allow 12 hours to cure.

PRIMING

Prime the brittle and destructed concrete surfaces with BPU PRIMER to increase the stability of the surface. If the

DESCRIPTION

BPU 10H is a one-component (1K) water based polyurethane hybrid membrane used for long-lasting waterproofing. It is liquid and highly permanent elastic cold applied & curing. BPU 10H is developed specifically for roof and building facade coatings. BPU 10H is applied in ambient temperature and cures with the humidity of the atmosphere. BPU 10H is strongly adhesive to various types of substrates. This advanced emulsion works to improve critical architectural performance and aesthetic characteristics by enhancing water resistance, color strength and overall durability. BPU 10H is water thinned. BPU 10H is formulated from the best polyurethane hybrid resin combined to a mix of special fillers providing excellent weather, chemical, UV, mechanical and thermal resistance.

APPLICATION TOOLS

BPU 10H is applied by paint brush, roller or airless equipment.

USES

WATERPROOFING & PROTECTION OF:

* Roofs, Verandas...	* Gypsum & Cement board
* Wall surface	* Asbestos products
* Balconies & Terraces	* Ceramic
* Basement	* Floor tile
* Kitchen	* Wood floor
* Wash room	* Air-raid shelter
* Reservoir	* Color steel tile
* Swimming pool	* Concrete Bridges & Tunnels
* Subway	* Concrete floor
* Pipe	* Concrete Construction
* Garden flowers	* PU Foam Insulation
* Bitumen membranes	* Car parking
* EPDM, PVC membranes	* Stadium stands...

KEY BENEFITS & FEATURES

* Simple application (paint brush, roller or airless spray).
* When applied forms seamless membrane without joints or leak possibility.
* Superior water resistance.
* Good salt-spray resistance.
* Maintains its mechanical properties over a temperature span of -50°C to +90°C.
* Exceptional blend of elasticity and tensile strength.
* Strong adhesion to most architectural roofs and facades.
* Resistant to frost.
* Uniform coverage without surface defects such as blisters or peeling
* Full surface adherence without additional anchoring.
* The waterproofed surface can be walked on.
* In case the membrane gets damaged, it can be repaired easily, locally, within minutes.
* Eco-Friendly: APEO, NMP, NEP & formaldehyde-free.
* Max. Service temperature 80°C,
* Max. Shock temperature 200°C.
* Low cost.
* Waterborne: Soluble in water.
* Excellent chemical resistance.
* When cured it is absolutely non-toxic therefore it can be used in water tanks.
* UV, corrosion & thermal aging resistance



concrete surface to be waterproofed is stable, prime with a layer of diluted BPU 10H. Dilute with water.

WATERPROOFING MEMBRANE

Apply the material with roller or brush in two at least coats. Do not leave more than 48hr between coats.

Stir well before using. Pour the BPU 10H onto the primed surface and lay it out by roller or paint brush, until all surfaces is covered. You can use airless spray system allowing a considerable saving of manpower.

Reinforce with Fiber seal Fabric at problem areas, like wall-floor connections, light-domes, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet BPU 10H a correct cut piece of fiber-seal fabric, press it to soak, and saturate again with enough BPU 10H.

After 12 hours (but not later than 36 hours), apply another layer of the BPU 10H, by using roller, brush or airless spray.

CONCRETE SUBSTRATE CONDITIONS (STD.)

Hardness	:	R ₂₈ = 15 Mpa
Humidity	:	W < 10%
Temperature	:	From 5°C to 35°C
Relative Humidity	:	< 85%

PACKING

25 KG.

CLEANING

Clean tools and equipment first with paper towels and then wipe by using water.

SHELF LIFE

Minimum 12 months in Original Unopened Pails at a temperature of 5°C – 25°C in dry area.

COMPLIANCE - CE

BPU 10H raw materials comply with the EU guideline for this kind of materials, EOTA (European Organization of Technical Approval).

CLASSIFICATION ACCORDING TO EOTA GUIDELINE (European Organization of Technical Approval)

REQUEST	VALUE	CLASSIFICATION
Minimum Guarantee Working Life	10 years	W2
Climatic Zone	Severe	S
User Load	Low	S
Roof Slope	<5%	S1-S4
Minimum Surface Temperature	-20°C	TL3
Maximum Surface Temperature	+90°C	TH4

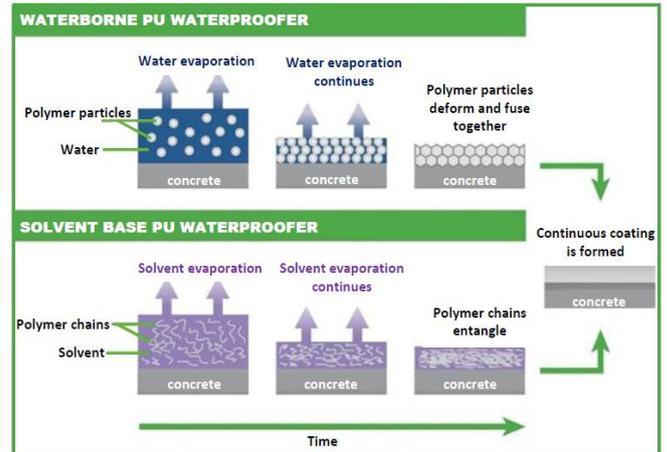
VISCOSITY VARIATION WITH TEMPERATURE

TEMPERATURE (DEGREES C)	VISCOSITY (cP)
10	8900
20	6700
25	4050
30	3500
50	1200

ATTENTION

Do not apply the BPU 10H over 0.6 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.

WARNING: The BPU 10H is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface.



Dow Construction Chemicals

Although different, water-based and solvent-based water-proofer, both same result in a sealed concrete surface.

COLOR: WHITE

TECHNICAL SPECIFICATIONS

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	>760 %	ASTM D 412
Tensile Strength	>6 N/ mm ²	ASTM D 412
Water Vapor Permeability	~20 gr/m ² /day	ISO 9932:91
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2,0 N/mm ² (concrete surface failure)	ASTM D 903
Hardness (Shore A Scale)	65 ± 5	ASTM D 2240 (15")
Construction Material	B2	DIN 4102-1
Fire class		
Resistance to Sparks & Radiating Heat	Passed	DIN 4102-7
Rain Stability Time	4 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	12 hours	
Final Curing time	7 days	
Tear Strength (N/mm)	>10	
Breathability	3 – 5 Perms	
Low temperature flexibility	-10°C no crack	-20°C no crack
Impermeability(0.3 MPa,30mn)	No Leakage	
Mycotic resistance	Prevent microbe growth	
Algae resistance	Inhibiting the growth of algae	
Flammability	Non flammable substrate, A	
Chemical Properties	Good resistance against acidic and alkali solutions (10%),detergents, seawater and oils.	

PHYSICAL & CHEMICAL CHARACTERISTICS

PROPERTY	UNITS	TEST METHOD	RESULTS
Viscosity (Brookfield)	KU	ASTM D2196-86 @25°C	120
Specific Weight	gr/cm ³	ASTM D1475/DIN 53217/ ISO 2811 @ 20°C	1.27 – 1.30
Flash Point	°C	ASTM D93, Closed Cup	42
PVC		ASTM C1127M-15	34.78
VS		ASTM D3925	35.86
pH		ASTM D5324-16	8.54
Gloss	%	ASTM D3928-00a	9.4
Opacity	%	ASTM D2805	86.2
Solid Contents	%		90 ± 2
Tack Free time @ 25°C & 55%RH	Hours	-	6
Recoat time	Hours	-	5 to 24