

HYPERDESMO®-PB-1K

One component, polyurethane - bitumen liquid membrane for flashing, waterproofing & protection.

DESCRIPTION

HYPERDESMO®-PB-1K is a quick curing, one component, thixotropic, bitumen-extended polyurethane fluid. It produces a hydrophobic, elastic membrane with very strong adhesion to most types of substrates, as well as bituminous and excellent mechanical and chemical resistance properties. It is ideal for application on vertical surfaces: No running, no bubbling.

It is based on pure elastomeric hydrophobic polyurethane resin and is extended with chemically polymerised virgin bitumen.

Apply with brush or spatula. Total consumption: 1.5 kg/m² in two coats.

COMPLIANCE-CERTIFICATION

The product is CE certified: 2085-CPR-061 according to the European Standard EN 1504-2.

RECOMMENDED FOR

Waterproofing and protection of:

- gypsum and cement boards,
- asphalt membranes (for repair also),
- cementitious substrates,
- roofs,
- concrete/steel reinforced concrete or otherwise,
- light roofing made of metal or fibrous cement,
- basements,
- foundations,
- closed spaces with high humidity.

LIMITATIONS

Not recommended for unsound substrates or UV-exposed applications.

FEATURES & BENEFITS

- Thixotropic: Easily applied on vertical surfaces and complex shapes without running or bubbling.
- Fast curing.
- Excellent adhesion on almost any type of surface, with or without the use of special primers.
- No thinning is required but SOLVENT-01 may be used.
- Excellent thermal resistance, the product never turns soft. Max service temperature 80 °C, max shock temperature 150 °C.
- Resistance in the cold: The film remains elastic even down to -40 °C.
- Outstanding mechanical properties, high elongation, tensile and tear strength, high abrasion resistance.
- Excellent chemical resistance.
- Effective humidity barrier.

APPLICATION PREREQUISITES

In general, **HYPERDESMO®-PB-1K** has excellent adhesion to most types of substrates, as well as bituminous, without the use of primers. Nevertheless, testing before use is strongly advised. Please contact our technical department for further information.

Concrete substrate conditions (standard):

- Hardness: R₂₈ = 15MPa.
- Humidity: W < 10%.
- Temperature: 5-35 °C.
- Relative humidity: < 85%.

Primer selection for special conditions and substrates:

Please refer to the **Primer Selection Table**.

HYPERDESMO®-PB-1K

APPLICATION PROCEDURE

Clean the surface using a high-pressure washer, if possible. Remove oil, grease and wax contaminants. Cement laitance, loose particles, mould release agents, cured membranes must be removed. Fill surface irregularities with the appropriate product.

Application:

Apply with brush or spatula.

CONSUMPTION

Total consumption: **1.5 kg/m²** in two coats.

CLEANING

Clean tools and equipment first with paper towels and then using SOLVENT-01.

PACKAGING

600 cc, 1 kg, 4 kg and 20 kg.

SHELF LIFE

Can be kept for 12 months minimum in the original unopened pails in dry places and at temperatures of 5-25 °C. Once opened, use as soon as possible.

SAFETY INFORMATION

Contains a small quantity of volatile flammable solvents. Apply in well-ventilated, no smoking areas, away from naked flames. In closed spaces use ventilators and carbon active masks. Keep in mind that solvents are heavier than air so they creep on the floor. The MSDS (Material Safety Data Sheet) is available on request.

TECHNICAL SPECIFICATIONS

In liquid form (before application):

~85% dry matter in Xylene.


PROPERTY	UNITS	METHOD	SPECIFICATION
Viscosity (Brookfield)	cP	ASTM D2196-86, @ 25 °C	20,000 – 30,000
Specific weight	gr/cm ³	ASTM D1475 / DIN 53217 / ISO 2811, @ 20 °C	~1
Flash point	°C	ASTM D93, closed cup	> 50
Tack free time, @ 77 °F (25 °C) & 55% RH	hours	-	1.5-2.5
Recoat time	hours	-	3-24

HYPERDESMO[®]-PB-1K

The cured membrane:

PROPERTY	UNITS	METHOD	SPECIFICATION	
Service temperature	°C	-	-40 to 80	
Max. temperature short time (shock)	°C	-	150	
Hardness	Shore A	ASTM D2240 / DIN 53505 / ISO R868	35	
Tensile strength at break @ 23 °C	Kg/cm ² (N/mm ²)	ASTM D412 / EN-ISO-527-3	50 (5)	
Percent elongation @ 23 °C	%	ASTM D412 / EN-ISO-527-3	> 600	
Adhesion to concrete	kg/cm ² (N/mm ²)	ASTM D4541	Without primer: >0.5 N/mm ² (EOTA minimum requirement)	With primer: >2 N/mm ²
Thermal resistance (200 days @ 80 °C)	-	EOTA TR011	passed	
QUV Accelerated Weathering Test (4hr UV, @ 60 °C (UVB-Lamps) & 4hr COND @ 50 °C)	-	ASTM G53	passed (1000 hours)	
Chemical resistance (Sodium Hypochlorite NaOCl 5% 10 days)	-	-	unaffected	
Hydrolysis resistance (Potassium Hydroxide 8% 10 days @ 50 °C)	-	-	unaffected	
H ₂ O absorption (10 days)	-	-	< 0.9%	

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 2085	
ALCHIMICA S.A. 7 Lampsakou, Athens - GREECE	
2085-CPR-061/07.12.2018 EN 1504-02:2004	
HYPERDESMO PB-1K Concrete surface protection systems-Coating	
CO ₂ permeability	147m
Permeability to water vapor	3,1m
Capillary absorption & permeability to water	0,02 kg/m ² h ^{0,5}
Adhesion strength by pull-off test	1,8 N/mm ²
Abrasion resistance	NPD
Impact resistance	NPD
Reaction to fire	Euroclass F
Dangerous substances	In accordance with 5.3

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