

HYPERDESMO®-FR-KIT

Fire retardant, polyurethane liquid membrane for waterproofing & protection.

DESCRIPTION

HYPERDESMO®-FR-KIT is a two-component polyurethane fluid which cures with the humidity in the atmosphere. It produces a highly durable, fire retardant, waterproofing membrane with strong adhesion to many types of surfaces. It is classified as M2 according to the French SNPE standards and B2 according to the German DIN 4102. As such, **HYPERDESMO®-FR-KIT** displays the following:

- Non-continuous spread of flame,
- limited dripping behaviour,
- self extinguishing characteristics,
- no acute toxic gas liberation,
- low heat and smoke release.

HYPERDESMO®-FR-KIT is based on pure elastomeric hydrophobic polyurethane resin plus special inorganic fillers, which result in excellent mechanical, chemical, thermal, UV and natural element resistance properties.

Apply with brush, roller or airless spraying in two coats with minimum total consumption of 1.2-1.5 kg/m².

COMPLIANCE

In compliance with fire standards:

- From EOTA,
- French SNPE standards (M2),
- German DIN 4102 standard (B2).

RECOMMENDED FOR

Waterproofing and protection of:

- Tiles (under),
- polyurethane insulation foams,
- bathrooms,
- verandas and balconies,

- roofs, also roofs of high fire risk plants, e.g. power, chemicals, etc.,
- light roofing made of metal or fibrous cement,
- asphalt membranes,
- EPDM membranes.

LIMITATIONS

- Not recommended for unsound substrates.



When exposed to UV, a slight discoloration of the membrane is probable. This will not affect, in any way, the fire retarding and waterproofing properties of the final coat. For better colour protection, it is recommended to apply a protective topcoat of **HYPERDESMO®-ADY-E** (always pigmented at the desired color).

FEATURES & BENEFITS

- Fire retardant.
- Non-continuous spread of flame.
- Limited dripping behaviour.
- Self-extinguishing characteristics.
- No acute toxic gas liberation.
- Low heat and smoke release.
- Fast curing.
- Bubble and defect-free result.
- Excellent adhesion to almost any type of surface, with or without the use of special primers.
- Excellent UV and thermal resistance. Max service temperature 80 °C, max shock temperature 200 °C.
- Resistance to cold: The film remains elastic even down to -40 °C.
- Excellent mechanical properties, high tensile and tear strength, high abrasion resistance.
- Good chemical resistance.

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- Water vapor transmission: The film breathes so there is no accumulation of humidity under the coat.

APPLICATION PREREQUISITES

Can be successfully applied on:

Concrete/steel reinforced concrete or otherwise, fibrous cement, mosaic, cement roof tiles, old (but well adhered) acrylic and asphalt coats, wood, corroded metal, galvanized steel. For information about other substrates, please contact our tech department.

Concrete substrate conditions (standard):

- Hardness: $R_{28} = 15$ Mpa.
- Humidity: $W < 10\%$.
- Temperature: $5-35$ °C.
- Relative humidity: $< 85\%$.

Primer selection for special conditions and substrates:

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

APPLICATION PROCEDURE

Clean the substrate using a high pressure washer, if possible. Remove oil, grease and wax contaminants. Cement laitance, loose particles, mould release agents, cured membranes must also be removed. Surface irregularities should also be filled.

Priming:

Apply the required primer following the guidelines above.

Mixing:

Use a low speed (300 rpm) mixer for the two components. Add SOLVENT-01 5-10% for application by spraying. Pot life of mix, 20-30

minutes.

Application:

Apply with roller, brush or airless spraying (200-250 bar) in two coats. Do not exceed 48 hours between coats. If more time passes (more than 4 days) or if you are unsure of the interlayer adhesion, use **MICROSEALER-50** primer.

CONSUMPTION

First coat: $0.75-0.9$ kg/m².

Second coat: $0.75-0.9$ kg/m².

Minimum total consumption: **$1.5-1.8$ kg/m²**.

CLEANING

Clean tools and equipment first with paper and then using SOLVENT-01. Rollers will not be re-usable.

PACKAGING

17 kg (15 + 2) and 28 kg (25 + 3).

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 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 float near the floor. The MSDS (Material Safety Data Sheet) is available on request.

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TECHNICAL SPECIFICATIONS

In liquid form (before application):

PROPERTY	UNITS	METHOD	SPECIFICATION
Viscosity (Brookfield)	cP	ASTM D4287, @ 25 °C	1,500-2,500
Specific weight	gr/cm ³	ASTM D1475 / DIN 53217 / ISO 2811, @ 20 °C	Comp. A: 1.3-1.4 Comp. B: 0.9-1.1
Tack free time, @ 77 °F (25 °C) & 55% RH	hours	-	3-5
Recoat time	hours	-	6-24
Pot life of mix	mins	-	20-30

In cured form (after application):

PROPERTY	UNITS	METHOD	SPECIFICATION
Fire class	-	French SNPE German DIN 4102	M2 B2
Service temperature	°C	-	-40 to 80
Max. temperature short time (shock)	°C	-	200
Hardness	Shore A	ASTM D2240 / DIN 53505 / ISO R868	70
Tensile strength at break @ 23 °C	Kg/cm ² (N/mm ²)	ASTM D412 / EN-ISO-527-3	75 (7.5)
Elongation @ 23 °C	%	ASTM D412 / EN-ISO-527-3	> 500
Water vapor transmission	gr/m ² .hr	ASTM E96 (Water Method)	0.8
Adhesion to concrete	kg/cm ² (N/mm ²)	ASTM D4541	> 20 (> 2)
Tensile set (after 300% elongation)	%	ASTM D412	< 3
QUV Accelerated Weathering Test (4hr UV, @ 60 °C (UVB-Lamps) & 4hr COND @ 50 °C)	-	ASTM G53	passed (2000 hours)

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Hydrolysis (8% KOH, 15 days @ 50°C)	-	-	no significant elastomeric property change
Hydrolysis (H ₂ O, 30 day-cycle 60-100 °C)	-	-	no significant elastomeric property change
HCL (PH=2, 10 days @ RT)	-	-	no significant elastomeric property change

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