

## HYPERDESMO®-POLYUREA-2K-HC



### Two-component, sprayable, hot-cure polyurea for waterproofing & protection.

#### DESCRIPTION

**HYPERDESMO®-POLYUREA-2K-HC** is a two-component polyurea system, composed of 100% solids, for application by plural component spraying equipment.

It is highly elastic and has a polymerization profile specially formulated for enhanced adhesion. It is highly recommended for commercial and industrial applications that require high levels of abrasion resistance and impact strength.

Minimum total consumption: 1.5-2.0 kg/m<sup>2</sup>.

#### RECOMMENDED FOR

Sealing of cementitious surfaces.

Waterproofing and protection of:

- PU and polystyrene insulation foam,
- floors,
- roofs,
- tanks,
- drinking water tanks
- pipes.

#### COMPLIANCE - CERTIFICATION

CE: ETA 11/0016 liquid applied roof waterproofing kit

Potable water tank waterproofing: UNE-EN 12873-1/2014 RD 140/2003

#### LIMITATIONS

Not recommended for:

- unsound substrates.



Direct UV exposure requires the use of a top coat to retain the colour.

Recommended Top coats:

**HYPERDESMO® ADY 810**

**HYPERDESMO® ADY-2K**

**HYPERDESMO® ADY-E**

**AQUASMART® TC 2K FLOOR PROTECT**

The selection of the final topcoat should be done based on the final use of the surface. Please see individual TDS of the above list or contact our technical department.

#### FEATURES & BENEFITS

- Quick curing - gel time 30 sec (unaffected by humidity and weather).
- Bubble and defect free membrane.
- 100% solids, of which, more than 85% urea groups.
- No plasticizers.
- No heavy metal toxic catalysts.
- Excellent thermal resistance, the product never turns soft. Max service temperature 80 °C, max shock temperature 350 °C.
- Resistance in the cold: The film remains elastic even down to -40 °C.
- Excellent mechanical properties: High tensile and tear strength, high abrasion resistance.
- Good chemical resistance.
- Moisture vapor transmission: The film breathes so there is no accumulation of humidity under the coat.
- Special primers available for almost every substrate.

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### APPLICATION PREREQUISITES

#### Concrete substrate conditions (standard):

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

#### Primer selection for special conditions and substrates:

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

### 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 appropriate products.

#### Priming:

Apply the required primer following the guidelines above.

#### Application:

Drums of components should be pre-heated to  $25^{\circ}\text{C}$  prior to mixing or dispensing. In cold weather conditions, it is recommended that the drums be protected with a heating jacket prior to

use. Please contact our technical department for information on setting up plural component dispensing machines. Do not walk on membrane for 24 hours after application.

### CONSUMPTION

Minimum total consumption: **1.5-2.0 kg/m<sup>2</sup>**.

### CLEANING

Cured polyurea is very difficult to remove. Spillages should be kept to a minimum and cleaned up immediately. A special solvent is available for cleaning and flushing of the lines.

### PACKAGING

Drums of 198 kg + 193 kg.

### SHELF LIFE

Can be kept for minimum 12 months in the original unopened pails in dry places and at temperatures of  $5\text{-}25\text{ }^{\circ}\text{C}$ .

### SAFETY INFORMATION

The MSDS (Material Safety Data Sheet) is available on request.

### TECHNICAL SPECIFICATIONS

#### In liquid form (before application):

PROPERTY	UNITS	METHOD	SPECIFICATION	
			COMP. A	COMP. B
Viscosity (BROOKFIELD)	cP	ASTM D2196-86, @ $25\text{ }^{\circ}\text{C}$	1,000-2,000	1,000-1,500
Specific weight	gr/cm <sup>3</sup>	ASTM D1475 / DIN 53217 / ISO 2811, @ $20^{\circ}\text{C}$	1.00-1.10	1.05-1.15
			Cured membrane: $\sim 1.00$	
Gel time	sec	-	20-30	
Cure time	hours	-	24	

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### The cured membrane:

PROPERTY	UNITS	METHOD	SPECIFICATION
Service temperature	°C	-	-40 to 80
Max. temperature short time (shock)	°C	-	350
Hardness	Shore A Shore D	ASTM D2240 / DIN 53505 / ISO R868	90 40
Tensile strength at break @ 23 °C	(N/mm <sup>2</sup> )	ASTM D412 / EN-ISO-527-3	15
Percent elongation @ 23 °C	%	ASTM D412 / EN-ISO-527-3	> 400
Tear resistance	[KN/m]	-	>100
Water vapour transmission	gr/m <sup>2</sup> .hr	ASTM E96 (Water Method)	0.8
Abrasion Resistance (Taber) CS17 WHEELS, 1000 REVS, 1000 gr	mg loss	ASTM D6040	<30

# HYPERDESMO®-POLYUREA-2K-HC



<b>CE</b>
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<b>ALCHIMICA S.A.</b> 7 Lampsakou, Athens - GREECE
DoP CPR-11/0016-COAT
ETAG 005, Part 1 & Part 6 1219
HYPERDESMO-POLYUREA-2K-HC Liquid Applied Roof Waterproofing Kit, Based on Polyurethane www.alchimica.com

Essential characteristics	Performance	Harmonized technical specification
Minimum thickness	1.6mm	ETAG 005 - part 6
Water vapor diffusion resistance factor ( $\mu$ )	~9000	ETAG 005 - part 6
Resistance to wind loads	>50KPa	ETAG 005 - part 6
Resistance to plant roots	NPD	ETAG 005 - part 6
Statement on dangerous substances	Does not contain any	ETAG 005 - part 6
Resistance to slipperiness	NPD	ETAG 005 - part 6
External fire performance	Broof (t1): Concrete support	ETAG 005 - part 6
Fire reaction	Class F	ETAG 005 - part 6
Expected working life	W3 (25 years)	ETAG 005 - part 6
Climatic zone of use	S (Severe)	ETAG 005 - part 6
User loads	P4:TH2, P4:TH4, Concrete P3:TH4, Polystyrene	ETAG 005 - part 6
Roof slopes	S1 to S4	ETAG 005 - part 6
Minimum surface temperatures	TL3 (-20°C)	ETAG 005 - part 6
Maximum surface temperatures	TH4-TH2	ETAG 005 - part 6

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