

# HYPERDESMO® AQUA



ETA-17/0922

## Very Fast Drying, Water based, One Component, Fully Aliphatic Polyurethane Coating for Waterproofing and Protection

### DESCRIPTION

**HYPERDESMO® AQUA** based on **ALCHIMICA's** innovative water based polyurethane dispersion technology, protects structures in an environmental way, offering waterproofing in the most difficult conditions. **HYPERDESMO® AQUA** provides excellent resistance to ponding water with high resistance to difficult weather conditions and as it is aliphatic, it offers excellent resistance to UV radiation and improves the energy performance of a building by reducing surface temperatures. It is thixotropic, with excellent workability and quick drying which makes it easy to apply to a variety of substrates such as concrete or metal ceilings, polyurethane foam, etc. It is easily applied by brush, roller or spray in two or more coats on both vertical and horizontal substrates, forming an elastic and hydrophobic film. The product can be used with a second component (booster) during cold weather for faster curing.

### COMPLIANCE - CERTIFICATION

- **CE:** EN 1504-02:2004 No: 2928-CPR-55
- **CE:** ETA-17/0922

### RECOMMENDED FOR

Waterproofing, Painting and Protection of:

- PU foam,
- Roofs,
- Light roofing made of metal or fibrous cement,
- Under tile applications such as wet rooms
- Protection of concrete/reinforced concrete from carbonization

### LIMITATIONS

Not recommended for:

- Unsound substrates: (in some cases, application is possible with the use of geotextile reinforcement; please contact our technical department for consultations).

### FEATURES & BENEFITS

- Water based
- Very fast drying
- Easy to apply & repair.
- Thixotropic
- Seamless.
- Elastic.
- Highly resistant to stagnating water (ensure proper adhesion-see suitable primers list).
- Water vapor transmission: The film breathes so there is no accumulation of humidity under the coat.
- Excellent weather and UV resistance. The white color reflects much of the solar energy and so reduces the internal temperature of structures considerably.
- Easy coloring of product with almost any water-based pigment paste available at hardware stores, subject to adequate tests.
- Compatible with all standard **ALCHIMICA's** Primers.

### APPLICATION PREREQUISITES

**Can be successfully applied on:**

Concrete, fibrous cement, cement roof tiles, wood, galvanized steel, PU foam. For information about other substrates, please contact our tech department.

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## Standard concrete substrate conditions:

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

Suitable primers: **AQUADUR**, **AQUASMART®-DUR**, **AQUASMART®-PU PRIMER-2K** or **MICROSEALER-50**, depending on the substrate. Please contact our technical department for primer selection advice.

## 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 recommended primer according to Technical Data Sheet specifications.

For non-demanding applications (where standing water or negative water pressure is not an issue) prime with same material by diluting with 15% water. For more professional applications, apply primers as per above list or contact our technical department for further information.

## Mixing:

Use a low speed (300 rpm) mixer.

## Application:

Apply with roller, brush or airless spraying in two or more coats.



Do not apply under conditions of extreme wet weather or imminent rain or near freezing temperature.

## CONSUMPTION

- Applied with roller or brush -  
First coat:  $0.6-0.8 \text{ kg/m}^2$ .  
Second coat:  $0.6-0.9 \text{ kg/m}^2$ .
- Applied by airless spraying:  $0.5 \text{ kg/m}^2$  per coat.  
Minimum total consumption:  **$>1.5 \text{ kg/m}^2$**  for waterproofing, depending on project requirements. For use as a protective paint, recommended consumption is  $0.5 \text{ Kg/m}^2$ .

## CLEANING

Clean tools and equipment immediately with water.

## PACKAGING

Plastic pails of 5kg, 12 kg

## SHELF LIFE

Can be kept for 12 months minimum in the original unopened pails in dry places and at temperatures of  $5-25 \text{ }^{\circ}\text{C}$ . Once opened, use as soon as possible. Protect from freezing conditions.

## SAFETY INFORMATION

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 D2196-86, @ 25 °C                     | 20,000-40,000 |
| Specific weight                  | gr/cm <sup>3</sup> | ASTM D1475 / DIN 53217 / ISO 2811, @ 20 °C | 1.45-1.55     |
| Required application temperature | °C                 | -                                          | > 5           |

### In cured form (after application):

| PROPERTY                                                                         | UNITS                                   | METHOD                            | SPECIFICATION        |
|----------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------|----------------------|
| Service temperature                                                              | °C                                      | -                                 | -20 to 90            |
| Hardness                                                                         | Shore A                                 | ASTM D2240 / DIN 53505 / ISO R868 | 70                   |
| Tensile strength at break @ 23 °C                                                | Kg/cm <sup>2</sup> (N/mm <sup>2</sup> ) | ASTM D412 / EN-ISO-527-3          | 50 (5.0)             |
| Elongation @ 23 °C                                                               | %                                       | ASTM D412 / EN-ISO-527-3          | > 300                |
| H <sub>2</sub> O absorption                                                      | %                                       | -                                 | < 5                  |
| QUV Accelerated Weathering Test (4hr UV, @ 60 °C (UVB-Lamps) & 4hr COND @ 50 °C) | -                                       | ASTM G53                          | passed (2,000 hours) |

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## CLASSIFICATION ACCORDING TO EN 1504-02

|                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------|
| <b>CE</b>                                                                                                                   |
| 22                                                                                                                          |
| <b>ALCHIMICA S.A.</b><br>7 Lampsakou, Athens-GREECE                                                                         |
| 2928-CPR-55                                                                                                                 |
| EN 1504-2:2004<br>2928<br>HYPERDESMO® AQUA<br>Product for protection and repair of concrete structures<br>www.alchimica.com |

| Essential characteristics                                 | Performance                  | Harmonized technical specification |
|-----------------------------------------------------------|------------------------------|------------------------------------|
| CO <sub>2</sub> permeability, m                           | S <sub>D</sub> >50           | EN 1504-2:2004                     |
| Permeability to water vapor, m                            | S <sub>D</sub> <5<br>Class I |                                    |
| Capillary absorption, kg/m <sup>2</sup> ·h <sup>0.5</sup> | w<0.1                        |                                    |
| Adhesion strength by pull-off test, N/mm <sup>2</sup>     | ≥1.5                         |                                    |
| Abrasion resistance, mg                                   | <3000                        |                                    |
| Impact resistance, N.m                                    | ≥4<br>Class I                |                                    |
| Reaction to fire                                          | Euroclass F                  |                                    |

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CLASSIFICATION ACCORDING TO EOTA (EUROPEAN ORGANISATION OF TECHNICAL APPROVAL)

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| <b>CE</b>                                                                                                      |
| 24                                                                                                             |
| <b>ALCHIMICA S.A.</b><br>7 Lampsakou, Athens-GREECE                                                            |
| 17/0922                                                                                                        |
| EAD 030350-00-0402<br>1219<br>HYPERDESMO® AQUA<br>Liquid Applied Roof Waterproofing Kit based on Polyurethane. |
| www.alchimica.com                                                                                              |

| Essential characteristics                          | Performance              | Harmonized technical specification |
|----------------------------------------------------|--------------------------|------------------------------------|
| Minimum thickness                                  | 1.6mm                    | EAD 030350-00-0402                 |
| Water vapour diffusion resistance factor ( $\mu$ ) | ~890                     | EAD 030350-00-0402                 |
| Resistance to wind loads                           | >50KPa                   | EAD 030350-00-0402                 |
| Statement on dangerous substances                  | Does not contain any     | EAD 030350-00-0402                 |
| External fire performance                          | NPD                      | EAD 030350-00-0402                 |
| Expected working life                              | W2 (10 Years)            | EAD 030350-00-0402                 |
| Climatic zone of use                               | S (Severe)               | EAD 030350-00-0402                 |
| User loads                                         | P1 to P3 (P3 REINFORCED) | EAD 030350-00-0402                 |
| Roof slopes                                        | S1 to S4                 | EAD 030350-00-0402                 |
| Minimum surface temperatures                       | TL3 (-20°C)              | EAD 030350-00-0402                 |
| Maximum surface temperatures                       | TH4 (90°C)               | EAD 030350-00-0402                 |

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