AQUASMART®-DUR

Two-component, low viscosity, water based, 1:1 by volume, epoxy coating / primer.

DESCRIPTION

AQUASMART®-DUR is a revolutionary epoxy based primer/coating formulated by **ALCHIMICA™** research and development laboratory. It is a two-component, water based, epoxy coating, specially formulated for use in a 1:1 by volume ratio. This allows the user to consume even the smallest quantities and store the material for future needs. The viscosity of the material is low and the pot life long, making it ideal for DIY applications. **AQUASMART®-DUR** can be easily colored with universal pigment pastes available in hardware stores and can be filled with equal parts of quartz sand giving rise to an excellent protective coating for concrete surfaces. The material displays very low levels of yellowing upon prolonged exposure to UV.

COMPLIANCE - CERTIFICATION

- The adhesion strength of **AQUASMART®-DUR** exceeds the requirements of EOTA (European Organization of Technical Approval).
- **CE** certified according to EN 1504-2:2004.

RECOMMENDED FOR

- Primer for **AQUASMART®** range of polyurethane dispersion products as well as **HYPERDESMO®** and Epoxy range.
- Primer when humidity barrier properties are required
- Sealing coat for concrete,
- Adhesive layer between old and new concrete,
- Anti-Dust floor coating
- Protective coating for old metal based structures

FEATURES & BENEFITS

- 1:1 By volume application ratio
- Quick curing even at lower temperatures
- Low-odor, safe and non-flammable (zero VOC).
- Suitable for application in closed spaces.
- Easy clean up.
- Strong adhesion even on damp or green concrete. Also on iron, galvanized steel, aluminium, glass and wood.
- Good mechanical properties and abrasion resistance.
- Easy coloring with water based pigment paste
- Visible pot-life

APPLICATION PROCEDURE

Mixing:

Mix the two components well manually or using a low speed (300 rpm) mixer.

Application:

- As primer –

  Application in thin coats only. Apply with roller in one or two coats with total maximum consumption of 150-200 gr/m^2.
- As water/humidity barrier –

  Apply with roller in three coats with total consumption of 500-600 gr/m^2.

Recoat time cannot be determined in terms of hours since it is highly dependent on weather conditions: It can be as low as 2 hours during summer and as high as 24 hours during winter. Use the following rule of thumb to determine when recoating should take place. Recoat (with **AQUASMART®-DUR** or **HYPERDESMO®**) when material has hardened to the degree where it can no longer be punctured by finger nail.

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- Do not exceed the stated consumption numbers, as this will affect adversely its adhesion and durability.
- Pot life of mixture is 1-hour maximum at 25 °C.
- Do not apply when temperature is below 12 °C.
- Hot concrete should be wetted before application.

CONSUMPTION

- As primer – Apply in one or two thin coats with total consumption of **150-200 gr/m²**.
- As water/humidity barrier – Apply in three coats with total consumption of **500-600 gr/m²**.

CLEANING

Clean tools and equipment first with paper and then using water. Under no circumstances should they be re-used to mix/apply polyurethane products.

PACKAGING

Component A: 1 Lt, 4 Lt
Component B: 1 Lt, 4 Lt

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

AQUASMART®-DUR is free of solvents. Nevertheless, you are advised to observe the standard safety rules: Apply in well-ventilated, no smoking areas, away from naked flames. In closed spaces use ventilators and carbon active masks. The M.S.D.S. (Material Safety Data Sheet) is available on request.

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TECHNICAL SPECIFICATIONS

In liquid form (before application, after mixing):
Component A – milky white
Component B – yellow

PROPERTY	UNITS	METHOD	SPECIFICATION
Viscosity (Brookfield) of mixed product	cP	ASTM D2196-86, @ 25 °C	100-400
Specific weight	gr/cm^3	ASTM D1475 / DIN 53217 / ISO 2811, @ 20 °C	1.0
Mixing ratio	A:B, by volume	-	1:1
Tack free time, @ 77 °F (25 °C) & 55% RH	hours	-	3-5
Hardness	Shore A	ASTM D2240	90
Full cure	days	-	3
Recoat time	-	-	When material has hardened to the degree where it can no longer be punctured by finger nail
Pot life	hours	-	1 @ 25 °C

In cured form (after application):

PROPERTY	UNITS	METHOD	SPECIFICATION
Service temperature	°C	-	5-40
Adhesion to concrete	kg/cm^2 (N/mm^2)	ASTM D4541	> 30 (> 3)
Resistance to friction	Gr	ASTM D4541 (Taber 503, CS17, 1.0 kg, 1,000 revs.)	120 * 10^{-3}

AQUASMART®-DUR

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2928-CPR-55
EN 1504-2:2004 2928 AQUASMART-DUR Concrete Surface Protection Systems-Coating
www.alchimica.com

Essential characteristics	**Performance**	**Harmonized technical specification**
CO_2 permeability	187 m	EN 1504-2:2004
Permeability to water vapor	3,7 m	
Capillary absorption & permeability to water	0,002 kg/m^{2}·h$^{0.5}$	
Adhesion strength by pull-off test	3,7 N/mm^2	
Abrasion resistance	120 mg	
Impact resistance	8 N	
Reaction to fire	Euroclass F	
Dangerous substances	In accordance with 5.3	

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