HYPERDESMO®-ADY-E

One-component, semi-glossy, aliphatic, elastic polyurethane Top Coat.

DESCRIPTION

HYPERDESMO®-ADY-E is a one-component polyurethane coating, which contains specialty inorganic fillers that upon combination with small amount (5-10%) of **ALCHIMICA** pigment paste offer superior hiding power. This allows minimal consumption of material and omitting of a second coat (in cases of simple UV protection, not traffic resistance) resulting in overall cost reduction. The material is based on the very successful product **HYPERDESMO®-ADY-E (transparent)** so it has similar elastomeric properties with **HYPERDESMO®** products. It is based on pure elastomeric hydrophobic polyurethane resin, which results in excellent mechanical, chemical, thermal, UV and natural element resistance properties.

Apply with brush, roller or airless spraying in one or two coats. Minimum consumption per coat: 0.200 kg/m^2.

COMPLIANCE - CERTIFICATION

HYPERDESMO®-ADY-E is **CE** certified as part of the **HYPERDESMO®** System, offering increased UV resistance and colour protection.

RECOMMENDED FOR

- Top-coating **HYPERDESMO®** range of products.
- Top-coating flooring applications

LIMITATIONS

Not recommended for:

- Unsound substrates
- Application in thick coats

FEATURES & BENEFITS

- excellent hiding power even in one coat
- traffic resistant
- strong and uniform adhesion on almost any type of surface
- highly hydrophobic
- highly durable when exposed to the natural elements, maintains its elasticity even down to -40 °C
- excellent heat and ultraviolet/UV resistance, it will not yellow, peel or soften up to 90 °C. SRI (Solar Reflectance Index) for the white color is 106 as per ASTM E-1980
- outstanding resistance to chemicals and mechanical stresses (high tensile strength and abrasion resistance)
- compatible pigment pastes available in many colours

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, etc. must be removed. Further primer information available on request. The application surface must be **dry**.

When used as a topcoat, for colour protection of **HYPERDESMO®** products, it is either **pre-pigmented** from the factory in **white/grey** colour or it comes in **NEUTRAL version** that must be pigmented with **ALCHIMICA®**'s pigment pastes only (10% max). It must be applied WITHIN 24-72 hours of **HYPERDESMO®** depending on weather conditions.

HYPERDESMO®-ADY-E

Preparation:
When stirring (or pigmenting) take care not to introduce air in the fluid, which may result in bubbling on the cured membrane. Stirring can either be done manually or with a low speed (300 rpm) mixer.
A small sediment may form in the pail after prolonged storage. This can be homogenized in the product with mechanical mixing.

Application:
Mix with ALCHIMICA pigment paste 5-10% or as required. ALCHIMICA guarantees product performance only when used with ALCHIMICA pigment pastes. Avoid outsourcing of pigment pastes as may contain chemicals that will inhibit material curing. Apply with brush, roller or airless spraying in one or two coats. Do not exceed 48 hours between coats.

CONSUMPTION

0.2-0.6 kg/m^2 in one or two coats, depending on traffic conditions.

CLEANING

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

PACKAGING

5 Kg, 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 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):

PROPERTY	UNITS	METHOD	SPECIFICATION
Viscosity (Brookfield)	cP	ASTM D2196-86, @ 25 °C	400-800
Specific weight	gr/cm^3	ASTM D1475 / DIN 53217 / ISO 2811, @ 20 °C	1.15-1.25
Tack free time, @ 77 °F (25 °C) & 55% RH	hours	-	6-8
Recoat time	hours	-	24

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The cured membrane:

PROPERTY	UNITS	METHOD	SPECIFICATION
Service temperature	°C	-	-40 to 90
Max. temperature short time (shock)	°C	-	200
Hardness	Shore D	ASTM D2240 / DIN 53505 / ISO R868	40
Tensile strength at break @ 23 °C	Kg/cm^2 (N/mm^2)	ASTM D412 / EN-ISO-527-3	>200 (20)
Percent elongation @ 23 °C	%	ASTM D412 / EN-ISO-527-3	> 250
Water vapor transmission	$gr/m^2.hr$	ASTM E96 (Water Method)	0.8
Thermal resistance (100 days @ 80 °C)	-	EOTA TR011	passed
QUV Accelerated Weathering Test (4hr UV, @ 60 °C (UVB-Lamps) & 4hr COND @ 50 °C)	-	ASTM G53	passed (2000 hours)
Hydrolysis (Potassium Hydroxide 8%, 10 days @ 50 °C)	-	-	no significant elastomeric property change
Hydrolysis (Sodium Hypochlorite 5%, 10 days)	-	-	no significant elastomeric property change
Water absorption	-	-	< 1.4%

NOTE: The below table of **HYPERDESMO ADY-E** chemical resistance has been compiled according to the particular **ASTM D1308** and is valid for spot testing exposure with immediate chemicals clean up and not for resistance to ponding chemicals.

HYPERDESMO®-ADY-E

Chemical Resistance of HYPERDESMO ADY-E
According to ASTM D1308

EXPOSED TO	RESULT
Acetic acid 10%	Minimal surface swelling after 24h
Acetone	OK
Ammonia 10%	OK
Hydrochloric acid 10%	Minimal surface swelling after 24h
Citric acid 10%	OK
Formic acid 10%	OK
Hydrogen peroxide 10%	OK
Lactic acid 10%	Surface swelling after 24h
Dichloromethane	Membrane softening after 24h
Nitric acid 10%	Surface swelling and yellowing after 24h
Potassium hydroxide 10%	OK
Sodium hypochlorite 13%	OK
Sulfuric acid 10%	OK
Tannic acid 10%	Black surface staining after 24h
Xylene	OK
Isopropyl alcohol	OK
Methyl ethyl ketone	OK
Milk	OK
White spirit	Minimal surface swelling after 24h
Acetonitrile	OK
Petroleum	Surface yellowing after 24h
Olein	Minimal surface swelling after 24h

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