

Technical Data Sheet

HYDROTHANE® AL

Serie 159691

PRODUCT DESCRIPTION

Water based two pack aluminum polyurethane topcoat with shiny appearance.

INTENDED USES

Topcoat characterized by high flexibility, hardness and gloss. Particularly suitable as a topcoat over water based epoxy systems for the protection of industrial plants, steel structures, metal structures located in the industrial and marine environments when are required for maximum performance weathering. Can be dried at room temperature or force-dried e.g. at 80°C. Rapid dry time and earlier handling. This product contributes to the Green Buildings standard credits for LEED certification.

TECHNICAL INFORMATION

Product type

Water based polyurethane aluminium topcoat

Colours

Aluminium

Solids (% +/- 2)

43 (by Volume) 55 (by Weight)

SOV/VOC (g/liter)

<115

Directive 2004/42/CE

Specific Gravity (g/liter +/- 100)

1120

SOV/VOC (g/liter) (calculated)

<115

Directive 2010/75/CE

Flash Point (°C +/- 2)

>50°C

Appearance

shiny

Temperature Resistance (°C)

90 (dry) - 110 (peak)

APPLICATION DATA

Application Range

(min - max)

Typical

| Film thickness per coat in micron | | Theoretical spreading rate | | Consumption |
|-----------------------------------|------------|----------------------------|--------------------|------------------|
| Dry | Wet | m ² /l | m ² /kg | g/m ² |
| 40 - 60 | 94 - 140 | 10.8 - 7.2 | 9.6 - 6.4 | - |
| 50 | 117 | 8.6 | 7.7 | 131 |

Room Temperature

min 10°C

Max 40°C

Relative Humidity

min 5%

Max 80%

Mixing Ratio

4 - 1 (by weight)

3,9 - 1 (by volume)

Pot life

3 h

Thinner/Cleaner

clear water (max. 15% by weight)

Application methods

Airless or conventional spray.

NOTE: mixing the two components separately, then catalyze the base and mixing the two components to obtain a homogeneous product. Mixing the two components viscosity of the product will increase. Then slowly add the water and under mixing dilution up to a maximum of 15% by weight.

If it's applied to dry thicknesses exceeding 100 micron, the dry film can lead to blistering.

Guideline for airless spray

Pressure at nozzle

15 Mpa (150 kp/cm² , 2100 psi)

Nozzle tip

0,46 - 0,58 mm (0,018 - 0,023")

Ti.Pi.Ci. s.a.s. di C.M. Pinto & C.

Via Val Lerone, 21 - 16011 Arenzano (GE) - Tel. 0109111368 r.a. - Fax 0109134188

P.IVA e C.F. 01346900994 - <http://www.tipici.net> - e-mail: tech@tipici.net

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SURFACE PREPARATION

the substrate must be clean and dry. Surface contamination is to be removed by detergents and fresh water cleaning.

CONDITION DURING APPLICATION

the temperature of the substrate should be min. 10°C and min. 3°C above the dew point of the air. The temperature and relative humidity should be measured in the vicinity of the substrate.

DRYING TIMES

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with: good ventilation (outdoor exposure or free circulation of air), recommended film thickness, one coat on top of inert substrate.

| Substrate temperature | Surface Dry ¹ | Hard Dry ² | Cured ³ | Dry to recoat ⁴ | |
|-----------------------|--------------------------|-----------------------|--------------------|----------------------------|----------------------|
| | | | | minimum ⁵ | Maximum ⁶ |
| 10°C | | 8 h | 72 h | 12 h | - |
| 20°C | | 5 h | 36-48 h | 8 h | - |
| 30°C | | 3 h | 24-36 h | 6 h | - |

- 1
- 2 Data resulted by tests and experience in pratical applications. A good ventilation can improve the drying time.
- 3 Data resulted by tests and experience in pratical applications.
- 4 Recommended data given for recoating with same generic type of paint.
- 5 In case of multi-coat application, drying times will be influenced by the number in sequence and by the total thickness of previous coat applied.
- 6 The surface should be dry and free from any contamination prior to application of the subsequent coat.

Given data must be considered as guidelines only. Actual drying time can only be decided at site, depending on age of existing system, generic types, numbers of coates, thinning, temperature, ventilation, etc.

THIS PRODUCT IS INTENDED FOR PROFESSIONAL USE ONLY

The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Ti.Pi.Ci.'s technical documentation.

STORAGE AND PACKAGING
STORAGE

the product should be stored in accordance with national regulations. The best storage conditions are to keep the packages in a dry space provided with adequate ventilation.

SHELF LIFE 12 month comp. A and 6 months comp. B (at room temperature).
PACKAGING 16 kg comp. A and 4 kg comp. B (20 kg KIT A+B)

HEALTH AND SAFETY

For detailed information on the health and safety hazards and precautions for the use of this product, we refer to the Material Safety Data Sheet.

Disclaimer

The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product is often used under contitions beyond our control, we can not guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.