

Single-component waterborne polyurethane waterproofing membrane

DESCRIPTION

Single-component, easy to apply, waterproofing resin in aqueous dispersion, based on an aliphatic hybrid polyurethane resin. It has the consistency of a semi-fluid paste of high thixotropy. It is always supplied colored. Once it has dried forms a thick, continuous, elastic coating, watertight, completely adhered to the support and highly resistant the outdoors conditions (does not yellow when exposed to sunlight).

APPLICATION

Waterproofing and protective coating for:

- Sloped roofs, balconies and terraces (membrane always exposed). "cool roof" high reflective finish with Impermax Aqua in white color.
- Chimney joints and other roofs details.
- Protection of polyurethane insulation foam especially on vertical surfaces.
- Anti-carbonation treatment for concrete.
- Protective coating of exterior surfaces (vertical and sloped): walls and facades.

PROPERTIES

Continuous, elastic, moisture vapor permeable, impervious to liquid water and de-icing salts (chlorides), semi-gloss finish, unaffected by alkali environment, outdoors and UV resistant membrane. It shows a better behaviour against ponding water and quite superior mechanical resistance properties in relation to a traditional waterborne acrylic membrane; especially in extreme conditions (very high/low temperatures) and mainly at medium and long term, after prolonged outdoors exposure. If applied reinforced and thick enough, the coating is resistant to light pedestrian traffic.

CERTIFICATIONS

- CE Marking EN 1504-2: 0370-CPR-2247
- Roofs exposed to external fire. Class B_{roof}(t1)



TECHNICAL DATA

PRODUCT INFORMATION BEFORE APPLICATION

Chemical description	Aqueous dispersion of hybrid polyurethane
Physical state	High thixotropy liquid
Presentation	Metal containers: 22.5 kg
Solids content	63%
Available colors	White/ Oxyd Red / Tile/ Dark Grey Consult for the possibility of other colours
Density	1.4 g/cm ³ (23°C)
Viscosity	10000-25000 mPa.s (s64, 50 rpm, 23°C)
Storage conditions	Protect from frost
Use before	Expiration: 12 months from its manufacture.

INFORMATION ON THE FINAL PRODUCT

Final state	Elastomeric solid membrane, semi-gloss finish
Hardness (Shore)	80A
Mechanical properties	Elongation at break: 200% Maximum tensile strength: 2 MPa (UNE EN ISO 527-1/3)
Adhesion strength	2,4 MPa over concrete with Humidity Primer (EN-1542:1999)
Water vapour resistance factor	Sd= 2,1. μ = 415 (EN-ISO-7783:2.012)
Liquid water permeability	W = 0,012 Kg/m ² x h ^{0.5} (EN-1062-3: 2018)
Carbon dioxide permeability	Sd = 56 metres (EN-1062-6:2003)



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Solar reflectance	White colour: 80.5 % (ASTM E-903-12)
Thermal emittance	White colour: 0.86 (ASTM C1371-15)
Solar reflectance index, SRI (Convective Coefficient, Medium Wind)	White colour: 99.55 (ASTM E1980-11)

CHEMICAL RESISTANCE

24-hour surface contact at room temperature (0=worst, 5=better)

Chemical	Result
Water	5
Salt water	5
Sodium hydroxide	5
Ammonia	4
Acetic acid (2%)	5
Xylene	0
Sulphuric acid (10%)	0
Bleach	3
Hydrochloric acid (2%)	4
Acetone	3
Isopropanol	1
Hydrogen peroxide	3
Beer	4
Diesel	5
Gasoline	3

SUPPORT REQUIREMENTS

To obtain a good penetration and adhesion, the support must always meet the following characteristics:

- Level and sloping (no risk of rainwater or dew stagnating).
- Fully continuous. Discontinuities in the support must be previously removed.
- Cohesive / compact with a minimum resistance of 1.5 N/mm² (pull off test).
- Regular and fine appearance.
- Free of cracks and crevices. If there are any, they must be filled in beforehand.
- Healthy, clean, as dry as possible, without dust or remains of materials or loose particles, surface grout and free of fats, oils and mosses.

The moderate presence of non-permanent moisture on the stand does not prevent the application of Impermax Aqua.

ENVIRONMENTAL CONDITIONS OF HUMIDITY AND TEMPERATURE

The recommended temperature of the support for the application is between 5°C and 40°C. Always apply 3°C above the dew temperature, to avoid the risk of condensation on the surface.

APPLICATION AND RECOMMENDED AMOUNTS

It can be applied with trowel, roller, brush or airless gun. It does not need primer or special mixtures.

For the waterproofing of a roof, it is recommended to apply at least two layers of 0.75-1 kg/m² per layer. To achieve a final thickness of approximately 1 mm. a total of about 2.25 kg / m² should be applied in several layers.

In case a better tensile strength is necessary (concrete with many cracks, structure with many movements or on a surface with discontinuities, for example, tiled) it is recommended to reinforce the first layer with a fiberglass mesh (Rayston Fiber 150) or with Geomax. In details and singular points, in works of waterproofing of roofs, it is recommended to apply the resin always reinforced.

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In case of application on a porous surface (dry or wet concrete, without water stagnation), a first layer diluted with 20% clean water can be applied, about 0.3 kg /m², as a primer to increase penetration and therefore adhesion to the support. Humidity Primer is also an alternative primer on this type of supports (wet or dry), especially for projects with higher stresses.

It is not advisable to apply the product in rainy weather (risk of it being washed by rain or even in dew).

The product can be diluted with clean water.

COMMISSIONING

At 20°C, at 24 hours, usually.

DRYING TIME

6 h at 20°C.

TOOL CLEANING

Impermax Aqua is cleaned with water.

PRODUCT CLEANING AND MAINTENANCE

Maintenance must be carried out on the covers made with this product depending on the use made of them.

This maintenance includes the following operations:

- Removal of leaves
- Removal of grass, moss, vegetation and various garbage
- Maintain the proper functioning of the stormwater sewer
- Verify the presence of sinkhole bars in the places provided for this purpose, in order to avoid clogging them over time
- Verification of the correct maintenance of various structures (flashings, seams, parapets, cornices...)
- Verification of any breakages that may cause inappropriate use

SAFETY

Refer to the Product Safety Data Sheet.

ENVIRONMENT

Empty containers should be handled with the same precautions as if they were full. Consider packaging as waste to be treated by an authorized waste manager. If the containers contain residues, do not mix them with other products without previously ruling out possible dangerous reactions.

ADDITIONAL INFORMATION

The information contained in this TECHNICAL SHEET, as well as our advice, both written and provided verbally or through tests, are given in good faith based on our experience and the results obtained through tests carried out by independent laboratories, and without serving as a guarantee for the applicator, who must take them as merely indicative references and with strictly informative value.

We recommend studying this information in depth before proceeding to the use and application of any of these products, although it is especially convenient that they carry out tests "in situ", to determine the suitability of a treatment in the place, with the purpose and in the specific conditions that occur in each case.

Our recommendations do not exempt from the obligation that the applicator has to know in depth, the correct method of application of these systems before proceeding to their use, as well as to carry out as many previous tests as are appropriate if the suitability of these for any work, installation or repair is doubted, taking into account the specific circumstances in which the product is going to be used.

The application, use and processing of our products are beyond our control and therefore under the sole responsibility of the installer. Consequently, the applicator will be solely and exclusively responsible for damages arising from the total or partial non-observance of the user and installation manual and, in general, from the inappropriate use or application of these products. This data sheet overrides the previous ones.

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