

## Liquid aliphatic polyurethane waterproofing membrane

### DESCRIPTION

Single-component liquid waterproofing membrane. When cured, the product gives a colour-stable solid elastomeric membrane based on aliphatic polyurethane.

### APPLICATIONS

Liquid waterproofing

### PROPERTIES

Seamless, elastic, weather resistant membrane with good adhesion properties. Does not undergo yellowing or discolouration by sunlight. Aliphatic polyurethane. Non water dispersible.



### CERTIFICATION

- SRI Index (ASTM E1980-01) Tecnalia RI Report 12-02655-1

### TECHNICAL DATA

#### INFORMATION ON THE PRODUCT BEFORE APPLICATION

<b>Chemical description</b>	Single component aliphatic polyurethane, solventborne	
<b>Physical state</b>	Liquid	
<b>Packaging</b>	Metal cans: 6 / 10 / 25 kg	
<b>Non-volatile content (%)</b>	85%	
<b>Flash point</b>	45°C (ASTM D93)	
<b>Available colours</b>	White, gray 7040, gray 1001 Other colours under request	
<b>Density</b>	1,32 g/cm <sup>3</sup> (23°C)	
<b>Viscosity</b>	<b>Temperature (°C)</b>	<b>Viscosity (mPa.s)</b>
Approximate values	5	30000
	10	20000
	20	12500
	25	9500
	30	7000
<b>VOC (g/L)</b>	198 g/L	
<b>Pot life</b>	100 g, 23°C: 2 hours (skin formation)	
<b>Storage</b>	Keep at a temperature below 35°C, away from ignition sources and moisture	
<b>Expiration</b>	Product may be used up to 12 months (9 months if white) after manufacture in its sealed original container.	

#### INFORMATION ON THE FINAL PRODUCT

<b>Final state</b>	Solid elastomeric membrane	
<b>Hardness (Shore) ISO 868</b>	80A	
<b>Density of film</b>	1,45 g/cm <sup>3</sup>	
<b>Mechanical properties</b>	Maximum elongation: >250% Tensile stress: >6 MPa	
<b>Chemical Resistance</b>	Permanent contact (0=worst, 5=best)	
	<b>Product</b>	<b>Result</b>
	Water	5
	Hydrochloric acid, 200 g/L 2 h 80°C	4
	Hydrochloric acid 200 g/L 24 h 25°C	4
	Sodium Hydroxide 40 g/L, 24 h 25°C	5
	Ammonia 3% 24 h 25°C	5
	Acetone 24 h 25°C	1
	Ethyl acetate 24 h 25°C	3
	Xylene 24h 25°C	5
	Engine Oil	5
	Brake fluid	2

**UV resistance**  
Aliphatic-based polyurethane. Non yellowing

**Solar reflection Index (SRI) value**  
99.2-100.3 (white colour, 2-6 m/s)  
ASTM E1980-01

### SUPPORT REQUIREMENTS

In order to achieve a good penetration and bonding, support must be:

- Flat and leveled (Impermax is self-leveling)
- Compact and cohesive (pull off test must show a minimum resistance of 1,4 N/mm<sup>2</sup>).
- Even and regular surface
- Free from cracks and fissures. If any, they must be previously repaired.
- Clean and dry, free of dust, loose particles, oils, organic residues or laitance.

Application on bituminous surfaces is discouraged due to adhesion issues.

### RECOMMENDED ENVIRONMENTAL CONDITIONS

Support temperature should be between 0°C and 40°. High moisture conditions can lead to bubble formation under the membrane surface.

### PREPARATION

Treatment of critical spots is necessary, much in the same way as in Impermax.

### MIXING OR HOMOGENIZATION

Stir and homogenise the product before use. Some of the contents settle during storage and must be redispersed. Allow some minutes to release air bubbles. Stirring should be done at low speed. If needed, the product may be thinned with up to 10% of Rayston solvent, as a viscosity adjustment. Never use universal or unknown solvents (e.g. White spirit or alcohols)

### APPLICATION GUIDELINES

Apply by roller, brush, spreader or airless equipment. It is useful to apply in 2 differently coloured coats, at 1 kg/m<sup>2</sup> each. Although not strictly necessary, it is strongly recommended to use entirely the product of the container. If there is some product left, ensure it is completely sealed after use. Use a spiked roller immediately after spreading in order to reduce bubbling.

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### CURING TIME

Curing time is dependent on the environmental conditions. Curing rate increases with temperature and humidity rises. The following table gives a rough estimation of the curing time under diverse conditions for a 1,5 kg/m<sup>2</sup> coat.

Temp (°C)	Relative humidity (%)	Thickness. (microns)	Skin formation (h)
20	40	250	1.25
20	40	500	1.5
20	40	1000	2.5
20	75	250	1
20	75	1000	1.5

### RETURN TO SERVICE

At 20°C, 60% hr, after 24 to 48 hours. Final hardness is achieved after 10-15 days

### TOOL CLEANING

Liquid Impermax A can be cleaned with Rayston Solvent, acetone and alcohols. Once cured, it cannot be dissolved.

### CLEANING AND MAINTENANCE

A maintenance work must be carried out regularly on the treated roofs according to the intended use.

This work includes the following tasks:

- Leaf removal
- Grass, dirt, moss and other vegetation removal
- Keeping storm water system in good working order.
- Ensure gratings are in place, in order to prevent gutter obstructions.
- Check proper condition of several structures (flashing, seams, retaining walls...)
- Verification of possible damages due to improper use.

If aesthetic appearance of the roof is an important issue, it is essential to regularly clean the surface with water (some mild detergent may be added), according to the use.

For stain removal, a surface treatment with Rayston solvent or isopropyl alcohol may be attempted. Strong acids are totally inadequate. Some solvents may damage the membrane. If this happens, the affected area has to be cut and repaired with a new Impermax A application.

### SAFETY

Impermax A contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precaution described there. As a general rule, a suitable ventilation must be ensured and all ignition sources must be avoided. This product is intended to be used only for the uses and in the way here described. This product is to be used only by industrial or professional users. It is not suitable for DIY-type uses.

### ENVIRONMENTAL PRECAUTIONS

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorized waste manager. If there is some residual product in the containers, do not mix it with other substances without checking for possible dangerous reactions.

### INFORMACIÓN COMPLEMENTARIA

The information contained in this DATA SHEET, as well as our advice, both written as verbal or provided through testing, are based on our experience, and they do not constitute any product guarantee for the installer, who must consider them as simple information.

We recommend to study deeply all information provided before proceeding to the use or application of any of our products, and strongly advise to conduct tests "on-site" in order to determine their convenience for a specific project.

Our recommendations do not exempt of the obligation of installers to deeply study the right application method for these systems before use, as well as to conduct as many preliminary tests as possible should any doubt arise. The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. In consequence, the installer will be the only responsible of any damage derived from the partial or total in-observation of our indications, and in general, of the inappropriate use or application of these materials.

***This Data Sheet supersedes previous versions.***