

## Liquid elastic polyurethane membrane

### DESCRIPTION

**One component liquid composition,** after polymerization gives an elastomeric, cold-applied polyurethane membrane. The membrane cures in a continuous and elastic form, as a totally adhered layer. This waterproofing layer guarantees total watertightness and withstands building movements. Its aliphatic polyurethane composition provides UV stability, useful for Impermax, aromatic PU based topcoats, or light-stable pigmented elastic coatings.



### ADVANTAGES

- Clear, glossy topcoat.
- UV resistant
- Excellent adhesion.
- Crack-bridging capability
- Water resistant.
- Waterproof. Withstands permanent contact with water.
- Good chemical resistance (cleaning products).



### CERTIFICATIONS

- **Applus independent laboratory:** Accelerated weathering test: N° 06/32013329
- **Applus independent laboratory:** drinking water contact: N° 07/320000006
- **ETA:** European Technical Agreement Document N° 10/0296 – 25 year CE marking.



### TECHNICAL DATA

#### INFORMATION ON THE PRODUCT BEFORE APPLICATION

<b>Chemical description</b>	Solvent borne single-component aromatic polyurethane
<b>Physical state</b>	Liquid
<b>Packaging</b>	Metal cans: 4/ 9 / 20 kg
<b>Non-volatile content (%)</b>	50%
<b>Flash point</b>	36° C (ASTM D 93)
<b>Available colour</b>	Colourless or slightly yellow. It can be pigmented.
<b>Density</b>	0.96 g/cm3 (20°C)
<b>Viscosity</b>	
approximate Brookfield	150 mPa.s

<b>VOC (g/L i %)</b>	VOC content: 450 g/l
VOC class as per 2004/42/EC	Product subclass: i II Solvent based single-component performance products <u>Limit from 01/01/2010:</u> 500 g/l

<b>Pot life</b>	6 hours (1 kg, 20°C, 50% hr)
<b>Storage</b>	Keep at a temperature below 30°C, away from ignition sources and moisture
<b>Use before</b>	Product may be used up to 12 months after manufacture in its sealed original container.

### INFORMATION ON THE FINAL PRODUCT

<b>Final state</b>	Solid elastomeric membrane
<b>Colour</b> Note: Pigment is delivered separately	Colourless or according to the specific pigmentation. For available colours and use details, see Technical Data sheets of Pigment PU
<b>Hardness (shore)</b>	65-70A
<b>Mechanical properties</b>	Maximum elongation: 276% Tensile strength: 10.4 MPa
<b>Chemical resistance</b>	Permanent contact. (0=worst, 5=best)

Chemical	Test conditions	Result
Water	24h, 25°C	5
Salt water	24h, 25°C	5
Hydrochloric acid solutions	200 g/l, 24h, 25°C	1
Sodium hydroxide	40 g/l, 24h, 25°C	5
Acetone	24h, 25°C	1
Ethyl acetate	24h, 25°C	3
Xylene	24h, 25°C	5
Engine oil	24h, 25°C	5
Brake Fluid	24h, 25°C	2

<b>Thermal resistance</b>	Stable up to 100°C.
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### SUPPORT REQUIREMENTS

- In order to achieve a good penetration and bonding, support must be:
1. Flat and levelled (Impermax is self-levelling)
  2. Compact and cohesive (pull off test must show a minimum resistance of 1,4 N/mm<sup>2</sup>).
  3. Even and regular surface
  4. Free from cracks and fissures. If any, they must be previously repaired.
  5. Clean and dry, free of dust, loose particles, oils, organic residues or laitance.

### RECOMMENDED ENVIRONMENTAL CONDITIONS

Support temperature should be between 0°C and 40°. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice. High moisture conditions can lead to bubble formation under the membrane surface. In cold weather, or when curing time has to be shorter, accelerators can be used. More information under request. On non-porous substrates, do not dilute first coat. Subsequent coats may damage the first one if too thin.

### PREPARATION

It is necessary to prepare all critical spots. Consult application documents provided by Krypton Chemical.

### MIXING

Stir gently before use with a low-speed stirrer. If necessary, dilute with up to 10% Solvent Rayston for viscosity adjustment. Note: on non-porous substrates, do not dilute the first coat. Subsequent coats may damage the first one if too thin.

### APPLICATION GUIDELINES

Apply by roller, brush or airless spraying equipment. Although not strictly necessary, it is highly recommended use all the contents. If not, ensure total sealing of the remainder. Note: some roller materials are damaged by the solvent. If in doubt, is recommended to test before use.

### 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 500 microns coat.

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Temperature (°C)	RH (%)	Dry to touch (h)
35	20	6
20	40	15
15	10	70
5	20	>80

### RETURN TO SERVICE

At usual conditions (25°C, 50% rh) the membrane achieves up to 90% of its final properties in 3 days. For light traffic, wait a minimum of 24 hours.

### CLEANING

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

### CLEANING AND MAINTENANCE

It may be necessary to reapply Impertrans layers if they are worn out due to traffic, weather, corrosion, etc.

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 application.

### FAQ

Problem	Question	Cause	Solution
Does not cure	Suitable solvent?	Some thinning solvents are not suitable	Apply a second coat using only Rayston Solvent as a diluant
	Too diluted	An excess of solvent slows the curing rate	Use less diluted product
	Temperature?	Normal at low temperatures	Below 15°C use of accelerators is advised
Bubbles	Porous support?	High temperature	Wait until temperature drops and apply a first coat, diluted at less than 500 g/m <sup>2</sup>

### SAFETY

Impertrans 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, 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.

### OTHER INFORMATION

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.**