

IMPERMAX B 1K

RAYSTON
products



Single-component PU-bitumen waterproofing membrane for flashing and the waterproofing of foundations.

DESCRIPTION

Impermax B 1K is a semi-thixotropic resin, solvent-based polyurethane-bitumen, quick moisture-cured resin. Upon polymerization, forms a rubber-like waterproofing elastomeric membrane able to bridge-over the fissures of the support.



APPLICATION

Impermax B 1K is specially designed for flashing. Can be applied for:

- Waterproofing of unexposed surfaces, particularly the foundations of buildings (concrete supports and others).
- Vertical and horizontal surfaces.
- New buildings or refurbishment projects.

ADVANTAGES

- Seamless, high elastomeric, fully bonded, weather resistant membrane.
- Thick membrane can be applied in a single coat without priming, depending on the type of support.
- Resistant to continuous contact with neutral water.
- Quick curing.
- Resistant to root penetration.

CERTIFICATES

- CE marking, EN-1504-2 protection and repair of concrete structures. Certificate number 0370-CPR-2247.



- Root resistance according to CEN/TS 14416:2014

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description	Solvent borne single-component bituminous aromatic polyurethane	
Physical state	Liquid paste	
Packaging	Metal container: 5 / 25 kg	
Solid content (%)	70%	
Flash point	45° C (ASTM D 93)	
Colour	Black	
Density	1,12 g/cm ³ (25°C)	
Viscosity	Temperature (°C)	Viscosity (mPa.s)
	25	5400
VOC (g/L and %)	VOC content: 330 g/l Product subclass: i II Solvent based single-component performance products. Limit from 01/01/2010: 500 g/L	

Pot life	8 to 12 hours (1 kg, 20°C, 50% rh)
Storage	Keep at a temperature below 30°C, away from ignition sources and moisture. Product may be used up to 9 months after manufacture in its sealed original container.

INFORMATION ON THE FINAL PRODUCT

Final state	Solid elastomeric membrane
Colour	Black
Hardness (Shore)	35A (ISO 868)
Mechanical properties	Maximum elongation: >400% Tensile strength: 2 MPa (EN-ISO 527-3)

Adhesion strength	Surface	Force (MPa)
	Concrete Ceramics Polyurethane foam	2.0 2.6 1.4

Chemical resistance	Permanent contact (0=worst, 5=best)		
	Chemical	Conditions	Result
	Water	24 h, 25°C	5
	Salt water	24 h, 90°C	5
	Hydrochloric acid solutions	200 g/l, 24 h, 25°C	4
		200 g/l, 2 h, 80°C	4
		3 g/l, 24 h, 25°C	5
		3 g/l, 24 h, 80°C	4
	Sodium hydroxide	40g/l, 24 h, 25°C	5
	Ammonia 3%	24 h, 25°C	5

Water vapour permeability	$\mu = 2651$ (EN ISO 7783:2012)
Liquid water permeability	$W = 0,006$ Kg/m ² x h ^{0.5} (EN-1062-3: 2018)
Crack bridging properties (static)	Class A5, -10°C (EN-1062-7, Method A)

SUPPORT REQUIREMENTS

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/mm²).
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.

AMBIENTAL CONDITIONS

Support temperature should be between 0°C and 40°. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice.

Air temperature must be between 0°C and 30°C.

High moisture conditions can lead to bubble formation under the membrane surface.



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MIXING AND APPLICATION GUIDELINES

Stir and homogenize 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, avoiding mechanical means to prevent bubbles.

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)

Apply by roller, brush or airless machine. Apply approximate 1,5-2 kg/m² in one or two layers. It is strongly recommended to use entirely the product of the container. Non used product even kept in a closed container, may develop a thick cured skin on the surface.

CURING TIME

Curing time is dependent on the environmental conditions. Curing rate increases with temperature and humidity rises. The following table gives a estimation of the curing time under diverse conditions:

Temperature (°C)	Relative humidity (%)	Touch dry (hours)
7	50	4
27	60	1

RETURN TO SERVICE

At usual conditions (25°C, 50%) the membrane achieves up to 90% of its final properties in 3 to 4 days. Final hardness is not achieved until 10 or 15 days. It is preferable to wait this time before permanent contact with water is allowed.

Reapplication is possible as soon as the curing state of the first coat allows walking and working on it, and it should be done before 48 hours.

TOOL CLEANING

Liquid Impermax B 1K can be cleaned with Rayston Solvent, acetone, and alcohols. Once hardened, it cannot be dissolved. It is recommended to clean equipment as soon as possible.

QUESTIONS

Problem	Question	Causes	Solutions
Does not	Suitable	Some thinning	Remove as much

cure	solvent?	solvents are not suitable	as possible and apply a second coat using Rayston solvent as a diluent
	Too diluted?	An excess of solvent slows the curing rate	Use a less diluted coat

SAFETY

Impermax B 1K 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.



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