IMPERMAX QC

Fast curing liquid polyurethane waterproofing membrane

DESCRIPTION

One component liquid semi-thixotropic waterproofing composition, after polymerization gives an elastomeric, cold-applied polyurethane membrane. The membrane cures in a continuous and elastic form, as a fully adhered layer. This waterproofing layer guarantees total water tightness and withstands building movements. Its fast-curing rate allows its use as a base coat or reinforcing layer when the usual Impermax curing time makes the overall job to take undesirably long time to complete (e.g. low temperature applications).

APPLICATION

- Balconies, terraces.
- Baths (showers), kitchens and difficult access spots.
- Flooring with light pedestrian traffic.
- Stairs, stadiums, stands.
- Water pipes and reservoirs

ADVANTAGES

Elastic and seamless coating, weather resistant and excellent bonding.
No reinforcement usually required except at critical points.

CERTIFICATIONS

- **ETA**: European Technical Assessment document Nº 06/0263 – **CE marking**: 10 and 25 years.
- **BBA:** Agreement for roofs (nº11/4836)
- Root resistance according to CEN/TS 14416:2014 (reinforced with fiberglass)

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION			
Chemical description	Solvent borne single-component aromatic polyurethane		
Physical state	Liquid-paste		
Packaging	Metal container: 5 / 25 kg		
Non-volatile content	78-85%		
Flash point	45ºC (ASTM D 93)		
Available colours	Available colours listed in the current price list.		
Density	1.3 g/cm^3 (20ºC)		
Viscosity (Brookfield)	Temperature (ºC)	Speed (RPM)	Viscosity (mPa.s)
	20	100	10000
	35	100	1500
VOC (g/L & %) **VOC class**	VOC content: 184 g/l % VOC: 15 Product subclass: i II Solvent based single-component performance products. Limit from 01/01/2010: 500 g/L		
Pot life	4 - 6 hours (1 kg, 20ºC, 50% hr)		
Storage	Keep at a temperature below 30ºC, away from ignition sources and moisture. Product may be used up to 12 months after manufacture in its sealed original Container (Note: 9 months if white or black pigmented).		

INFORMATION ON THE FINAL PRODUCT			
Final appearance	Solid elastomeric menbrane		
Colour	According to the specific pigmentation		
Hardness (Shore)	65-70 A (ISO 868)		
Density film	1,3 g/cm^3		
Tear strength	14 N/mm (ISO 34-1, Method B)		
Water vapour permeability	μ>1000 (EN 1931), 20 g/m^2 day		
Abrasion test	14,3 mg (Taber, 1000 cycles, CS-10, UNE 48250)		
Mechanical properties	Maximum elongation: 617% Tensile stress: 4.1 MPa (EN-ISO 527-3)		
Chemical resistance	Permanent contact (0=worst, 5=best)		
	Chemical	Conditions	Result
	Water	24 h, 25ºC	5
	Salt water	24 h, 90ºC	5
	Hydrochloric acid solutions	200 g/l, 24 h, 25ºC	4
		200 gl/l, 2 h, 80ºC	4
		3 g/l, 24 h, 25ºC	5
		3 g/l, 24 h, 80ºC	4
	Sodium hydroxide	40g/l, 24 h, 25ºC	5
	Ammonia 3%	24 h, 25ºC	5
	Acetone	24 h, 25ºC	1
	Ethyl acetate	24 h, 25ºC	3
	Xylene	24 h, 25ºC	5
	Motor oil	24 h, 25ºC	5
	Brake fluid	24 h, 25ºC	2
Adhesion	Surface	Force (MPa)	
	Concrete	2.0	
	Ceramics	2.6	
	Polyurethane foam	1.4	
UV resistance	Products includes anti UV additives. A colour change is expected due to its aromatic polyurethane composition. This discolouration does not affect its properties.		
Thermal resistance	Stable up to 120ºC.		
Fire resistance	B roof= t1 (External fire exposure test)		

SUPPORT REQUIREMENTS

To achieve a good penetration and bonding, support must be:
1.Flat and leveled (Impermax is self-leveling)
2. Compact and cohesive (pull off test must show a minimum resistance of 1,4 N/mm^2).
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 0ºC and 30º. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice. Air temperature must be between 0ºC and 30ºC. High temperature and moisture conditions can reduce the pot life and lead to bubble formation under the membrane surface, and a deficient appearance.

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MIXING AND APPLICATION GUIDELINES

Stir and homogenize the product before use. Some of the contents may 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).

Resin can be applied by roller, brush, or spreader.

Apply in two layers a total quantity of about 1,6-2 kg/m^2. It is useful to apply each layer in a different color. 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 rough estimation of the curing time under diverse conditions for a 1 mm coat.

Temperature (ºC)	RH (%)	Dry to touch (h)
7	50	4
27	60	1

RETURN TO SERVICE

At usual conditions (25ºC, 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 CLEANIING

Liquid Impermax QC 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.

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 diluent
	Too diluted	An excess of solvent slows the curing rate	Use less diluted product
	Temperature is too low?		Use of Super accelerant is possible
High viscosity			Normal evolution in storage. Can be adjusted using Rayston solvent

SAFETY

Impermax QC 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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