Impermax QC Cold-Applied Liquid Plastics

DESCRIPTION
One component liquid waterproofing 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.

ADVANTAGES
Elastic and seamless coating, weather resistant and excellent bonding. Non water emulsifiable.
Permanent water contact is allowed.

Technical Data

INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description	Solvent borne single-component aromatic polyurethane
Packaging	Metal cans: 5 / 10 / 25 kg
Physical state	Liquid - Paste
Non-volatile content	85%
Flash point	45º C (ASTM D 93)
Available colours	Gray RAL 7001 . Other colours on request
Density	1,3 g/cm3 (20ºC)
Viscosity (Brookfield)	Approximate values

Temperature (ºC)	*rpm*	*Viscosity (mPa.s)*
20	100	10000
35	100	1500

VOC (g/L i %)	VOC content: 184 g/l
VOC class	Product subclass: i II Solvent based single-component performance products
	Limit from 01/01/2010: 500 g/l

Pot life

Conditions	*Pot life*
1kg 20ºC, 50% rh	4-6 hour

Storage Keep at a 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.

INFORMATION ON THE FINAL PRODUCT

Final appearance Solid elastomeric membrane

Colour According to the specific pigmentation

Hardness (Shore) 65-70 A (ISO 868)

Mechanical properties

Elongation (%)	*Stress (MPa)*
100	2,0
200	2,8
300	3,0
400	3,4

Maximum elongation: 421% Tensile stress: 3,4 MPa

(EN-ISO 527-3)

Tear strength 14 N/mm (ISO 34-1 Method B)

Water vapour permeability >1000 (EN 1931)
20 g/m2 day

Chemical resistance Permanent contact
(0=worst, 5=best)

Chemical	*Test conditions*	*Result*
Water	24 h, 25ºC	5
Salt water	24 h, 90ºC	5
Hydrochloric acid	200 g/l, 24 h, 25ºC	4
solutions	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	25 h, 25ºC	5
Motor oil	24 h, 25ºC	5
Brake fluid	24 h, 25ºC	2

Abrasion 14,3 mg (Taber, 1000 cycles, CS-10, UNE48250)

	Surface	Force (MPa)
Adhesion	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)

APPLICATION INFORMATION

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

1. Flat and leveled (Impermax QC is self-leveling)
2. Compact and cohesive (pull off test must show a minimum resistance of 1,5 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.

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 10ºC 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.

Mixing and Application guidelines

Stir and homogenize the product before use. Some of the contents settle during storage and must be re-dispersed. 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 Impermax solvent, as a viscosity adjustment. Never use universal or unknown solvents (e.g. white spirit or alcohols)

Apply by roller, brush, spreader or airless equipment. It is useful to apply in 2 differently coloured coats, at 1,5-2 kg/m2 each. 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 as 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)	Relative Humidity (%)	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 cleaning

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

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, 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 no 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 party 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.