Impermax B 2k

BITUMEN-BASED LIQUID WATERPROOFING POLYURETHANE MEMBRANE

DESCRIPTION and APPLICATIONS.

Impermax B 2k is a 2-component liquid waterproofing material that, upon polymerization, gives an elastomeric membrane composed of a polyurethane-polyurea-bitumen polymer. It forms a totally adhered membrane with crack-bridging capability.

It can be easily applied over a wide variety of substrates (concrete, brick, fibrous cement, ceramic tiles, bituminous products, steel, zinc, aluminium), offering the following benefits:

- Seamless, with no joints or overlaps. Totally substrate-adhered system, preventing inter-layer water flow. High elasticity.
- Non emusionable and water-repellent.
- Fast cure, less sensitive to atmospheric conditions. Productive application system, with little disturbance of other job site activities.
- Light traffic allowed without special renforcements (although they are recommended, depending on the use load
- Impermax B 2k does not need geotextile reinforcements except in critical spots
- Cost-effective combination, suitable for public utility works.

Technical data

PRODUCT INFORMATION

	Component A	**Component B**
Chemical description	Aromatic polyurethane solution	Bitument and PU-reactives in solution
Physical state	Liquid	Liquid
Packaging (Kit A+B predosificado)	Metal container 25 kg	Metal container 15 kg
Non volatile content (%)	85	78

VOC	184 g/L 15%	217 g/L 22%
Flash point	45ºC	27ºC
Colour	Black	Black

Density

Temperature (ºC)	*Density (g/cm3)*
25	1,30

Temperature (ºC)	*Density (g/cm3)*
25	0.99

Viscosity
Brookfield, approximate

Temperature (ºC)	*Viscosity (mPa.s)*
10	20000-30000
25	6000-10000
35	1000-1500

Temperature (ºC)	*Viscosity (mPa.s)*
10	1100
25	850
35	500

Mixing ratio A/B

A=100, B=60 by weight
A=100, B=79 by volume

Initial mixture properties.

Temperature (ºC)	*Density (g/cm3)*	*Viscosity (mPa.s)*
25	1.2	<5000

Pot life
Approximate

Conditions (100g)	*Pot life (min)*
25ºC,60% hr	60
10ºC, 60% hr	90

Storage and use

Keep at temperatures between 10º and 30ºC, protected from moisture and ignitions sources. Use before 12 months after manufacturing date.

FINAL PRODUCT INFORMATION

Final state

Solid elastic poluyrethane-polyurea-bitumen membrane

Colour

Black

Solid density

1,3 g/cm3

Hardness (Shore)

47A

Mechanical properties

Elongation (%)	*Strength (MPa)*
100	1.6
200	2.7
275	2.8

Elongation at break: 275%
Maximum tensile strength: 2,8 MPa

Tear resistance

4.7 N/mm

Adhesion strength

Concrete:
>1,5 N/mm2

Chemical resistance

Permanent contact
(5=ok, 0=not recommended)

Chemical	*Result*
Water	5
Sulphuric acid 30%	3
Methoxypropyl acetate	2
Isorpopyl alcohol	3
Xylene	1
Ammonia 3%	4
Acetic acid 10%	0
Sodium hydroxide (pH=12)	5
Bleach	5

APPLICATION GUIDELINES

Support requirements

Support must have the mechanical properties listed below:

Minimum cohesive strength: 1,5 MPa
Compression resistance: at least 25 MPa

Support must be completely free from water pressure from below. It must be clean, dry and with no signs of poorly adhesive areas. Moisture content should be less than 4%. It must be free from oil stains or other synthetic products.

Support temperature should be between 10ºC and 25ºC.

Where high moisture levels are suspected, a suitable primer, to be advised by Krypton Chemical, should be applied.

On new concrete slabs, wait a minimum of 21 days prior to apply Impermax Aqua 2k, in order to allow the support to dry thoroughly.

Ambiental conditions

Air temperature: +10ºC to 30ºC. It can be applied in cold and wet wheather. Raining before full cure does not damage membrane properies, although droplet marks are possible..

Recommended combinations

General case

1.Primer IH or EP100: 200 g/m2,
2. Impermax Aqua 2k: 1,5 kg/m2

Support preparation

It is important ot carry out a suitable surface treatment (sanding, sandblasting, etc) and to apply a suitable primer coat (e.g. Rayston EP100 primer, Primer IH). Primer must be dry before starting Impermax B 2k application.

Mixing

Open container of component A. Stir gentlyavoiding excessive trapping of air. Stir for 2 minutes. Pour component B into the A container and continue stirring for 2 more minutes. Check there is no unmixed product left.

Application

Apply by roller, brush or airless spraying gun (Graco GH-833 is an example of suitable equipment.

Solvent Rayston (upt to 10%) may be added for viscosity adjustments. Use only polyurethane-grade solvents or Solvent Rayston.

Recommended quantities

A coat of Impermax Aqua 2k can be applied up to 1,5 kg/2, to obtain an approximate coat thickness of 1 mm.

Quantities are set around 2 kg/m2 for a lreferred thickness of 1,5 mm, to be apllied in two coats. On sporous supports, it is davisable to apply a first coat of the product (ca. 0,5 kg/m2) as a primer or sealant, and followeb by the main layer at 1,5 kg/m2.

Curing time

Conditions	***Dry to toochrh (h)***
20ºC, 40% hr	5
20ºC, 80% rh	18
20ºC, 10% rh	10
7ºC, 60% rh	12

Reapplication

A second application can be done after 24 hours from the touch-curing of the first one..

Return to service

Under usual conditions, light pedestrian traffic is allowed after 3 days. A degree of curing suitable for most uses is achieved in 7 days (20ºC, 50% rh).

Tool cleaning

Component A and B can be cleaned with solvent Rayston. Cured product cannot be dissolved, except with special stripping products.

Repairs

Local repairs

Repairing should be done cautiously, trying to damage as little as possible the appearance of the whole area.

a) Cut and remove the damaged area

b) Prepare the underlying support, for ensuring a good adhesion

c) Local tratment with fresh Impermax B 2k, following previous instructions.

Safety

Impermax B 2k 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 suiable ventilation must be ensured and any skin contact 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 tranferred

to an authorized waste manager. If there is some residual product in the containers, component A and B can be mixed, always according to the A/B ratio, and allowed to cure. Do not mix volumes bigger than 5 litres in order to prevent dangerous reactions.

Other information

The information contained in this Technical Data Sheet, as well as our advice, both written as oral 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 all versions.

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