

POROSITY SEALER

RAYSTON
products



Aromatic polyurethane primer resin

DESCRIPTION AND APPLICATIONS

Aromatic one-component, moisture cure polyurethane resin for sealing, priming and binding agent for concrete. Excellent for porosity sealer in concrete and cement, or polyester/fiberglass slabs.

This resin cures by air moisture giving a tough and flexible coating, showing high abrasion and chemical resistance. It is an excellent polyurethane primer for floorings where porosity must be sealed with a substrate-penetrating resin.

It can be also used as a grain (glass beads) binder in anti-slip coatings on industrial floorings and parking decks as well.

CERTIFICATIONS

CE Marking EN 13813 SR-B2,0-AR0,5-IR14,7



TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description	Moisture-cured, monocomponent polyurethane resin, in organic solvent.	
Packaging	Metal container 4 kg, 20 kg	
Physical state	Liquid	
Density	0,95 g/cm ³ (25°C)	
Non-volatile content	60%	
Flash point	36°C (ASTM D 93)	
Colour	Slightly yellow	
Viscosity	Temperature (°C)	Viscosity (mPa.s)
	10	300
	20	170
	30	110
VOC (g/L and %)	393 g/L	
class	40% by weight	
	<u>Product subclass:</u> h 2 Consolidating primers, solvent based	
	<u>Phase II from 01/01/2010 on:</u> 500 g/l	
Pot life	2 hours (1 kg, 25°C, 60% rh)	
Packaging	Metal container: 4 kg/ 20 kg	
Storage	Keep below 35°C in a dry place, away from heat and ignition sources	
Use before	12 months after manufacturing date.	

INFORMATION ON THE FINAL PRODUCT

Final state	Solid film	
Colour	Colourless to slightly yellow	
Hardness (Shore)	60D (ISO 868)	
Mechanical properties	Elongation (%)	Tensile stress (MPa)
	2	25
	4	35
	5	36
	Maximum elongation: 5%	
	Maximum tensile stress: 36 MPa	
UV resistance	Porosity Sealer is an aromatic PU-based product. It will turn to yellow when exposed to sunlight, does not affect to its mechanical properties.	

Chemical resistance

Permanent contact (0=Not recommended, 5=best result)

Chemical	Conditions	Result
Water	7d, 80°C	5
Salt solution (saturated)	7d, 80°C	5
Xylenes	7d, 80°C	3
Ethyl acetate	7d, 80°C	2
Isopropyl alcohol	7d, 80°C	2
Sodium hydroxide (40g/L)	7d, 80°C	5
Hydrogen peroxide (33%)	7d, 25°C	3
Sulphuric acid (10%)	7d, 80°C	4
Bleach	7d, 80°C	4
Ammonia (3%)	7d, 80°C	4
Diesel	7d, 80°C	4
Hydrochloric acid (3%)	7d, 80°C	3

Surface contact, 24 hours at room temperature (0=not recommended, 5= best results)

Chemical	Result
Water	5
Ammonia (3%)	5
Isopropyl alcohol	1
Sodium hydroxide (40 g/L)	4
Hydrogen peroxide (33%)	5
Sulphuric acid (10%)	5
Xylene	4
Hydrochloric acid (5%HCl)	5
Ethyl acetate	1
Bleach	4
Diesel	4
Engine lubricant	5
Beer	5
Methyl ethyl ketone	0
Butyl acetate	2

Adhesion strength	Support Concrete	Adhesion (MPa) 50
Abrasion resistance	19 mg (Taber, CS-10, 1000 cycles)	
Water absorption	<1% by weight	
Thermal resistance	Stable up to 80°C	

RECOMMENDED COMBINATIONS

Option 1:

On less-porous substrates:

1. PU Primer 80-100 g/m²
2. Porosity Sealer, 100-300 g/m².

SUPPORT REQUIREMENTS

For a good adhesion, support must be:

1. Levelled (Porosity Sealer is self-levelling)
2. Cohesive/compact. Minimum 1,5 N/mm² (pull off test)
3. Uniform appearance.
4. Free from cracks.
5. Clean, dry, with no dust, laitance or loose material.



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06/08/2024

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AMBIENTAL CONDITIONS

Support temperature should be between 0°C and 30°C. Higher temperatures may give rise to bubble formation under the coating surface, or an uneven film due to the fast solvent evaporation.

SUPPORT PREPARATION

It is important to carry out a suitable preparative work when needed (sanding, sandblasting) and remove all loose material before starting application of the sealer.

MIXING

Not applicable if used undiluted.

APPLICATION

Apply by roller, brush or airless spraying equipment. Although not strictly necessary, it is recommended to use all the contents of the can. If not, ensure the remaining is kept tightly sealed after use.

It can be applied as such, but often in a first coat, it is diluted up to 25% with Slow Solvent Rayston. use of Rayston Solvent is not recommended.

Usual amounts applied range from 100 to 300 g/m².

CURING TIME

Curing time depends strongly on the ambient conditions. The higher the temperature and humidity are, the faster Porosity Sealer cures. The following table gives approximate values of curing for 500 g/m² wet films.

Conditions	Dry to touch (h)
35°C, 90% rh	1
25°C, 50% rh	4
35°C, 20% rh	4
7°C, 50% rh	8

REAPPLICATION

It is possible to apply a second coat or to resume job with the following coating from the moment when it is dry to touch up to 48 hours afterwards. It is important to ensure all the solvent has disappeared, to avoid bubble development under the sealer surface.

TOOL CLEANING

Use Slow Solvent from Rayston.

FAQ

Question	Check if	Causes	Solution
When trying to dilute the product some solids appear	Is that a suitable solvent	Rayston Solvent or other hydrophobic solvents are not suitable	Add Slow Solvent until redispersion

SAFETY

Porosity Sealer contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a rule, suitable 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 transferred to an authorized waste manager. Waste containers with small amounts of uncured product can be allowed to dry before sending to treatment.

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 studying 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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