RAYSTON EPOXY PLUS 2

DESCRIPTION AND APPLICATION

Epoxy resins are excellent adhesive material, very useful as primers for flooring applications and roofing. Rayston Epoxy Plus 2 is a high-solids, low viscosity epoxy system, consisting of 2 pre-dosed components. Depending on the substrate porosity, it can be diluted with Rayston solvent, to improve liquid penetration and adhesion performance.

Rayston Epoxy Plus is a useful product for concrete sealing prior to treatment with waterproofing or seamless resin flooring products. It can be also used for general surface leveling.

CERTIFICATIONS

CE Marking. EN 13813:2002. DoP 22-748

CE

Fire resistance	B_{fl}
Emission of corrosive substances	SR
Water permeability	NPD
Wear resistance (BCA)	AR 0,5
Tensile strength	B 2,0
Impact resistance	IR 14,7
Acoustic insulation	NPD
Acoustic absorption	NPD
Thermal resistance	NPD
Chemical resistance	NPD

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	Epoxy resin	Polyamine mixture
Physical state	Liquid	Liquid
Packaging	Metal container 20 kg	Metal container 5 kg
Non-volatile content (%)	95%	98%
Flash point	>120ºC	>100ºC
Colour	Colourless, hazy	Slightly yellow
Density	Temperature (ºC): 25 — Density (g/cm³): 1,57	Temperature (ºC): 25 — Density (g/cm³): 1,05
Viscosity Approximate values Brookfield	Temperature (ºC): 35, 25, 15 — Viscosity (mPa.s): 1900, 3000, 4600	Temperature (ºC): 35, 25, 15, 5 — Viscosity (mPa.s): 83, 150, 320, 800
VOC	<10 g/L, <2%	20 g/L, <2%
A/B mixing ratio	A=100, B=25 by weight	
Mixture properties	Density: 1,49 g/cm³ at 23ºC Viscosity: 1200 mPa.s at 23ºC	

Pot life	Temperature (ºC)	Pot life (100, min)
	6	>70
	25	40
	35	25

Storage	Keep between 10º and 30ºC. Component A may crystallize if stored for protracted periods under certain conditions. If this occurs, it can be restored to its original condition by heating it to 70 - 80 °C and stirring it thoroughly.
Use before	12 months after manufacturing date.

INFORMATION ON THE FINAL PRODUCT

Final state	Rigid, glossy, homogeneous material
Hardness (shore)	80D
Mechanical properties	Maximum elongation: 2,5% Tensile strength: 17 MPa (EN-ISO 527-3) Tear: 29 N/m
UV resistance	Undergoes slight yellowing under sunlight. No mechanical properties are affected.
Use temperature	Up to 80ºC
Chemical resistance	Permanent contact (3 days, 80ºC)

Chemical	% Weight gain
Water	0
Methoxypropyl acetate	5
Isopropyl alcohol	0
Skydrol	0
Xylene	3
Ammonia (3%)	0
Acetone	25
Diesel	0
Hydrogen peroxide	0
Sodium hydroxide (40 g/L)	0
Bleach	2
Sulphuric acid (10%)	0
Sulphuric acid (30%)	0
Sulphuric acid (50%)	0
Acetic acid (10%)	2

Surface contact (24h, room temperature, 5=ok, 0=not recommended)

Chemical	Result
Water	5
Ethyl alcohol	5
Engine oil	5
Vinegar	5
Hydrogen peroxide	5
Sulphuric acid (10%)	5
Sulphuric acid (30%)	5
Sulphuric acid (50%)	4
Isopropyl alcohol	4
Xylene	5
Ammonia (3%)	5
Diesel	5
Methoxy propyl acetate	4
Acetic acid (10%)	5
Bleach	5
Sodium hydroxide (40 g/L)	5
Acetone	3
Skydrol	5

SUPPORT REQUIREMENTS

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

1. Flat and levelled (Product is self-levelling)
2. Coct 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

RECOMMENDED ENVIRONMENTAL CONDITIONS

Support temperature should be between 15ºC and 40º. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice.

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SUPPORT PREPARATION

Surfaces must be previously prepared by cleaning and removal of all dust and loose material. In case of concrete, sandblasting is recommended.

MIXING

Stir and homogenise thoroughly component A and B using a low-speed stirrer. The mixture turns to a homogenous clear liquid. Do not mix more material than the amount usable within the pot life window. Mixing with quartz sand is possible for other intended uses.

APPLICATION

As a primer:
Apply 200 to 500 g/m^2 of undiluted product. Other quantities are possible when used with dilution. Use brush or roller.
On very absorbent substrates, a first coat may be diluted, followed by a second, undiluted coat.
Do not apply on hot surfaces.
Use enough amount to ensure complete surface sealing.
On big areas, it is recommended to spread some quartz sand in order to get a rough primer surface, improving the adhesion of the following polyurethane coat.

CURING TIME

Application tested: 500 g/m^2

Conditions	Dry to touch (h)
35ºC, 25%hr	1
23ºC, 50% hr	6
23ºC, 5% hr	7
7ºC, 60ºC	>20
-15ºC	Does not dry

REAPPLICATION

A second coat is possible as soon as the first one is dry to touch, and within the following 24 hours.

TOOL CLEANING

Use solvent Rayston for both components.

QUESTIONS AND ANSWERS

Problem	Question	Causes	Solutions
Uneven distribution	Wetting problems	Surface contamination	Dilution with solvent Rayston may be useful
in-can fast reaction		Too much material mixed	If mixed in smaller volumes, or even spread on the surface after mixing, working time can be extended.
Need colours	It can be pigmented		Yes, but ask manufacturer advice in order to select the right pigment paste

SAFETY

Epoxy components are potentially sensitizing. Component B is corrosive. Always follow instruction provided in the Material Safety Data Sheet. As a general rule, suitable skin and eye protection must be worn. 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 with the same precautions as if they were full. Treat empty containers as hazardous waste, and transfer them to an authorized waste manager. If the containes still have some material left, do not mix with other product before considering the risk of potential dangerous reactions. Never mix in volumes larger than 5 litres in order to prevent a dangerous heat evolution.

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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