

PAVISTONE EPOXY LY

RAYSTON
products



2-component, low yellowing high performance epoxy resin for binder applications

DESCRIPTION AND APPLICATION

2-component, clear epoxy resin, suitable for use as an aggregate sand binder. Designed for use as a binder for pavement applications that allows for a smooth floor, modern, tough, low maintenance, porous or semi-porous finish, depending on the type of aggregates used. The surface finish is a seamless, hard and resistant.

BENEFITS

- Paths
- Tree pits
- Parking decks
- Bike lanes
- Fences
- Ramps
- Pedestrian areas
- Parks
- Commercial areas
- Roads
- Residential areas

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 10 kg	Metal container 5 kg
Non-volatile content	98%	98%
Flash point	>120°C	>100°C
Colour	Colourless	Slightly yellow
Density	Temperature (°C) 23 Density (g/cm ³) 1,11	Temperature (°C) 23 Density (g/cm ³) 1,05
Viscosity	Temperature (°C) 23 Viscosity (mPa.s) 170	Temperature (°C) 23 Viscosity (mPa.s) 150
VOC	7 g/L, 0,7%	20 g/L, <2%
A/B mixing ratio	A=100, B=40 by weight A=100, B=42 by volume	
Mixture properties	Density: 1,06 g/cm ³ at 23°C Viscosity: 236 mPa.s at 23°C Colour: colourless or slightly yellow	
Pot life	Temperature (°C) 6 20 35	Pot life (100, min) <70 40 25
Storage	Keep between 10°C and 30°C, in a dry place. 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	Solid film
Colour	Colourless, slightly yellow
Hardness (Shore)	80D (ISO 868)
Mechanical properties	Elongation at break: 8% Tensile strength: 23 MPa (EN-ISO 527-3)

Solid density	1,10 g/cm ³																														
Tear strength	5,4 N/mm																														
UV resistance	A slight yellowing, far more reduced than that of other epoxy compositions under sunlight is expected, without loss of mechanical properties.																														
Chemical resistance	Permanent contact (3 days, 80°C)																														
	<table><thead><tr><th>Chemical</th><th>%weight gain</th></tr></thead><tbody><tr><td>Water</td><td>0</td></tr><tr><td>Methoxypropyl acetate</td><td>5</td></tr><tr><td>Isopropyl alcohol</td><td>0</td></tr><tr><td>Skydrol</td><td>0</td></tr><tr><td>Xylene</td><td>3</td></tr><tr><td>Ammonia (3%)</td><td>0</td></tr><tr><td>Diesel</td><td>0</td></tr><tr><td>Hydrogen peroxide</td><td>2</td></tr><tr><td>Sodium hydroxide (40 g/L)</td><td>0</td></tr><tr><td>Bleach</td><td>2</td></tr><tr><td>Sulphuric acid (10%)</td><td>0</td></tr><tr><td>Sulphuric acid (30%)</td><td>2</td></tr><tr><td>Sulphuric acid (50%)</td><td>2</td></tr><tr><td>Acetic acid (10%)</td><td>0</td></tr></tbody></table>	Chemical	%weight gain	Water	0	Methoxypropyl acetate	5	Isopropyl alcohol	0	Skydrol	0	Xylene	3	Ammonia (3%)	0	Diesel	0	Hydrogen peroxide	2	Sodium hydroxide (40 g/L)	0	Bleach	2	Sulphuric acid (10%)	0	Sulphuric acid (30%)	2	Sulphuric acid (50%)	2	Acetic acid (10%)	0
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Surface contact (24h, room temperature, 5=ok, 0=not recommended)

Chemical	Result
Water	5
Engine oil	5
Vinegar	5
Hydrogen peroxide	5
Sulphuric acid (10%)	5
Sulphuric acid (30%)	5
Sulphuric acid (50%)	5
Isopropyl alcohol	3
Xylene	2
Ammonia (3%)	5
Diesel	5
Methoxypropyl acetate	3
Acetic acid (10%)	3
Bleach	5
Sodium hydroxide (40 g/L)	5
Skydrol	5

Adhesion strength	Surface	Adhesion strength (MPa)
	Concrete	<0.05
Use temperature	Stable up to 80°C	

SUPPORT REQUIREMENTS

To achieve a good penetration and bonding, support must be:

1. Flat and levelled (product is self-levelling).
2. Compact 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.

TEMPERATURE AND AMBIENTAL CONDITIONS

Application must be done at support temperatures 3°C above dew point.

Air temperature must be above 5°C and relative humidity below 80%.



KRYPTON CHEMICAL SL

C/ Martí i Franquès, 12 - Pol. Ind. les Tàpies
43890 - l'Hospitalet de l'Infant - Spain
Tel: +34 977 822 245 - Fax: +34 977 823 977

www.kryptonchemical.com - rayston@kryptonchemical.com

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Application temperature must be less than 40°C. Optimal temperature range is 10°C- 30°C.

These temperatures must be constant throughout drying process. Application should be done with plenty of air/ventilation.

SUPPORT PREPARATION

Concrete surfaces must be previously prepared by sandblasting or any other suitable means. Remove all dust and loose material before priming.

Cut suitable joints along the concrete slab, depending on the total surface to be covered.

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.

APPLICATION

To ensure good aggregate binding, the resin amount will depend on several points:

- Grain size
- Dust content in the mineral aggregates
- Degree of absorption of the mineral aggregates.

Depending on these points, the required amount of resin will range from 3% to 10% of the mineral aggregates, by weight.

CURING TIME

For a 500 g/m² thick application.

Conditions	Dry to touch (h)
35°C, 25%hr	2
23°C, 50% hr	8
23°C, 5% hr	9
7°C, 60°C	>20
-15°C	uncured

REAPPLICATION

A second application may be done when the first one is dry to touch, and always within the first 24 hours.

TOOL CLEANING

Cleaning of tools contaminated with both components must be done with Solvent Rayston.

SAFETY

Epoxy components are potentially sensitizing. Component B is corrosive. Always follow instruction provided in the Material Safety Data Sheet. As a 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 contains still have some material left, do not mix with other product before considering the risk of potentially dangerous reactions. Never mix in volumes larger than 5 litres 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" 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.

