

# EP COAT 100 CLEAR

RAYSTON  
products



100% solids, colourless performance epoxy coating for flooring applications

## DESCRIPTION

Colourless, 2-component epoxy coating for concrete surface protection. Designed for general purpose uses in multilayer systems, from the primer coat to the topcoat layer.

## ADVANTAGES

Multilayer protective coating for heavily used concrete floors, in all kind of indoor areas.

- Industrial flooring
- Poorly ventilated areas.
- Car parks.
- Warehouses.
- Shops.

This material can be used as a primer and as a component of all the steps in a multilayer system. Also suitable as a self-leveling flooring resin. The different available option depend on the application choices, fillers and the pigmentation options.

## TECHNICAL DATA

### INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
<b>Chemical description</b>	Epoxy resin	Polyamine mixture
<b>Physical state</b>	Liquid	Liquid
<b>Packaging</b>	Metal container	Metal container
	10 kg	5 kg
<b>Non-volatile content (%)</b>	>95%	98%
<b>Flash point</b>	>120°C	>100°C
<b>Colour</b>	Colourless	Colourless
<b>Density</b>	Temperature (°C) Density (g/cm <sup>3</sup> ) 25 1,14	Temperature (°C) Density (g/cm <sup>3</sup> ) 25 1,04
<b>Viscosity</b>	Temperature (°C) Viscosity (mPa.s) approximate Brookfield	Temperature (°C) Viscosity (mPa.s)
	35 70 25 150 15 300	5 400 10 280 20 170
<b>VOC (g/L i %)</b> VOC class as per 2004/42/EC	<10 g/L, <2%	20 g/L, <2%
<b>A/B mixing ratio</b>	A=100, B=50 by weight	
<b>Mixture properties</b>	Density: 1,01 g/cm <sup>3</sup> at 23°C Viscosity: 480 mPa.s at 23°C	
<b>Pot life</b>	Temperature (°C) Pot life (100, min)	
	6 >70 25 40 35 25	
<b>Storage</b>	Keep between 15°C and 30°C. 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.	
<b>Use before</b>	12 months after manufacturing date	

### INFORMATION ON THE FINAL PRODUCT

<b>Final state</b>	Rigid, glossy, homogeneous material
<b>Colour</b>	Clear
<b>Hardness (shore)</b>	80D (ISO 868)
<b>UV resistance</b>	Undergoes slight yellowing under sunlight. No mechanical properties are affected.
<b>Use temperature</b>	Up to 80°C
<b>Mechanical properties</b>	Maximum elongation: 2,5% Tensile strength: 17 MPa Tear: 29 N/mm
<b>Chemical resistance</b>	Permanent contact (3 days, 80°C)

Chemical	% weight gain
Water	0
Methoxy propyl 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



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## SUPPORT REQUIREMENTS

In order 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/mm<sup>2</sup>).
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.

## SUPPORT PREPARATION

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

The recommended temperature of the support is 15-25°C, but not less than 10°C. The temperature of the support must exceed the "dew point" by 3°C during application and drying.

## RECOMMENDED ENVIRONMENTAL CONDITIONS

The recommended temperature of the support is 15-25°C, but not less than 10°C. The temperature of the support must exceed the "dew point" by 3°C during application and drying.

## MIXING

Stir and homogenize thoroughly component A and B using a low-speed stirrer. The mixture turns to a homogeneous clear liquid. Mix the quartz filler afterwards if desired. Do not mix more material than the usable amount within the pot life window.

## APPLICATION GUIDELINES

Pure resin requires roller or rubber spreader or squeegee. Combinations with filler requires application by metal spreader. The pure resin is applied to roller or rubber rake. Combinations with aggregates may require the use of a metal trowel.

## FLOORING LEVELING APPLICATION

Application	Product	Consumption
Smooth leveling mortar Surface roughness <1 mm	EP coat 100 Clear + Sand (0,1-0,3mm) with a ratio of 1:0,5	1.7 kg/m <sup>2</sup> /mm
Medium leveling mortar Surface roughness up to 2 mm	EP coat 100 Clear + sand (0,1-0,3mm) with a ratio of 1:1	1.9 kg/m <sup>2</sup> /mm
Intermediate self-levelling layer 1.5 to 3 mm	EP coat 100 Clear (0.1-0.3mm) with a ratio of 1: 1 Optional quartz broadcast 0.4-0.8mm	1.9 kg/m <sup>2</sup> /mm Aprox. 4 kg/m <sup>2</sup>
Union layer	EP Coat 100 clear	0.3-0.5 kg/m <sup>2</sup> /mm
High coating Thickness 15-20mm / repair mortar	EP coat 100 Clear + *sand with a ratio of 1: 8	2.2 kg/m <sup>2</sup> /mm

\*Thicknesses granulometry about 15-20 mm:

- 25% quartz sand 0,1-0,5 mm
- 25% quartz sand 0,4-0,7 mm
- 25% quartz sand 0,7-1,2 mm
- 25% quartz sand 2-4 mm

**Note:** The maximum grain size should be 1/3 of the final thickness of the layer. This information is theoretical and do not include additional material due to porosity, surface roughness, unevenness, etc. of the pavement.

## CURING TIME

Application 1 kg/m<sup>2</sup>

Conditions	Dry to touch (h)
35°C, 25% rh	2
35°C, 50% rh	8
23°C, 5% rh	9
7°C, 60% rh	>20
-15°C	No cure

## REAPPLICATION

Normally possible after 12-24 hours.

## RETURN TO SERVICE

Light traffic allowed after 24-48 hours. Final hardness is achieved after 7 days (approximate). Caution: contact with water when not fully cured may lead to white stains.

The application of the product at temperatures below 10°C could cause waterspotting effect.

If applications below 10°C are suspected, it will be advisable to apply a sealing layer before 24h.

## FAQ

Problem	Cause	Solution
Reaction is too fast. Short pot life	Too much product mixed	If mixed in smaller volumes or the mixture is spreaded as soon as it is ready, pot life is longer.

## TOOL CLEANING

Cleaning tools with Rayston Solvent.

## 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 containers still have some material left, do not mix with other product before considering the risk of potential dangerous reactions. Never mix volumes larger than 5 litres in order to prevent a dangerous heat evolution.



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## 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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