EP NIVEL

Self-levelling epoxy coating

DESCRIPTION

Self-levelling colourless or pigmented epoxy coating for surface protection. Allows obtaining self-levelling flooring 2-3 mm thick in one coat. Suitable for concrete floors exposed to intense use in all kinds of indoor areas. Can be completed with up to 33% of mineral filler. one part of resin: 0,5 of aggregate 0,1 - 0'3 mm.

APPLICATIONS

Designed for applications in dry zones. Usable on wet zones if sand is broadcasted on top. Smooth, glossy finish and easy to clean.

Best suited for:

- Industrial flooring.
- Poorly ventilated areas.
- Parking decks.
- Warehouses.

CERTIFICATES

- Tested by the CSTB (France) as part of the RAYSTON FLOOR EP 30 system (Report DSR-SIST-22-26085809/A). The system has a bond strength to concrete of 2.7 N/mm², high surface hardness (884 N/mm²), excellent resistance to rolling wear (ΔVr < 1 cm³), very low water absorption and good resistance to petrol, oils, brake fluids, alkalis and amines.
- **CE Marking:** EN 13813:2002 Cfl-SR-B2,0-AR0,5-IR14,7. DoP 20-734.

CE

TECHNICAL DATA

PRODUCT INFORMATION BEFORE APPLICATION		
	Component A	**Component B**
Chemical description	Epoxy resin	Polyamine mixture
Physical state	Liquid	Liquid
Packaging	Metal container (colourless) 10 kg Metal container (pigmented) 20.9 kg	Metal container (colourless) 5 kg Metal container (pigmented) 4.1 kg
Non-volatile content	>95%	98%
Flash point	>120ºC	>100ºC
Colour	Colourless or pigmented	Colourless
Density	Colourless: 1.14 g/cm³ (25ºC) Pigmented: 1.68 g/cm³ (25ºC)	Colourless: 1.05 g/cm³ (25ºC) Pigmented: 1.05 g/cm³ (25ºC)
Viscosity	Colourless: 500 mPa.s (25ºC) Pigmented: 2000 mPa.s (25ºC)	Colourless: 200 mPa.s (25ºC) Pigmented: 250 mPa.s (25ºC)
VOC	7g/L, <0.7% (colourless) <10g/L, <2% (pigmented)	20 g/L, <2%
Mixing ratio	A=100, B=40 by weight (colourless) A=100, B=19 by weight (pigmented)	
Mixture properties	Colourless 1.06 g/cm³ at 23ºC 236 mPa.s at 23ºC Pigmented 1,6 g/cm³ at 23ºC 1700 mPa.s at 23ºC	

Pot life	**Temperature (ºC)**	**Pot life (100 g, min)**
	6	>70
	25	40
	35	25
Storage and shelf life	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. Shelf life: 12 months from the date of manufacture when kept in its original unopened container	

FINAL PRODUCT INFORMATION		
Final state	Rigid, glossy, homogeneous material	
Colour	Pigmented. Available colours RAL 1001, 3009, 5015, 6021, 7001, 7011, 9003, 9004, 6002, 8001. Other colours under request.	
Hardness (Shore)	80D (ISO 868)	
Mechanical properties	Maximum elongation: 8% Tensile strength: 23 MPa	
UV resistance	Undergoes slight yellowing under sunlight, hardly noticeable in indoor applications. No mechanical properties are affected. It is not evident for most colours.	
Use temperature	Stable up to 80ºC	
Adhesion strength	**Surface**	**Adhesion (MPa)**
	Concrete (Rayston Epoxy 100)	>5
Chemical resistance	Permanent contact (3 days, 80ºC)	
	Chemical	**% weight gain**
	Water	0
	Methoxypropyl acetate	25
	Isopropyl alcohol	5
	Skydrol	0
	Xylene	10
	Ammonia 3%	0
	Acetone	25
	Diesel	0
	Hydrogen peroxide	0
	Sodium hydroxide 40g/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
Methoxypropyl acetate	4

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Acetic acid 10%	5
Bleach	5
Sodium hydroxide 40g/L	5
Acetone	3
Skydrol	5

SUPPORT REQUIREMENTS

To achieve a good degree of 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^2).
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.

RECOMMENDED AMBIENTAL CONDITIONS

Support temperature must be 3ºC above dew point at least. Air temperature should be above 5ºC and relative humidity less than 80%. Maximum application temperature is 40ºC. Best conditions are 10ºC-30ºC. These conditions should be maintained along all the curing time. Application should be done with plenty of air ventilation.

MIXING AND HOMOGENISATION

Stir and homogenise thoroughly component A and B using a low-speed stirrer. The mixture turns to a homogenous clear liquid. It can be mixed with 0.1-0,3mm sand at a ratio of resin:1, filler: 0.5. Do not mix more material than the usable amount within the pot life window.

APPLICATION

Pure resin requires roller or rubber spreader or squeegee. Combinations with filler require application by metal spreader. Pass a spike roller while still liquid.

CONSUMPTION

Consider a consumption of 3 kg/m^2. In EP Nivel, in combination with metallic pigments the consumption per layer will be 0.8-1 kg/m^2 in background layers, and 1-1.5 kg/m^2 in the decorative layer.

CURING TIME

Application 1 kg/m^2.

Conditions	Touch dry (h)
35ºC, 25%hr	2
35ºC, 50% hr	8
23ºC, 5% hr	9
7ºC, 60%hr	>20
-15ºC,	No cure

REAPPLICATION

Normally possible after 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 10ºC could cause the water spotting effect. If applications below 10ºC are suspected, it will be advisable to apply a sealing layer before 24 h of Colodur ECO.

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 asap, pot life is longer.

TOOL CLEANING

Clean tools 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.

ENVIRONMENT

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.

FURTHER 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 conducting 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.

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