

## Cementitious epoxy

### DESCRIPTION

Tecnocem Rayston is a cementitious epoxy system for use as a support preparation layer, composed of epoxy components and inorganic reactive fillers.


- Good adhesion to a wide range of construction materials even moist, and green concrete.
- Forms an efficient counterpressure water barrier
- Provides a waterproof support, with good water vapour permeability
- It can be coated with a range of finishing products
- Suitable for indoor applications (solventless product)

### APPLICATIONS

- Base layer for protection of concrete supports
- Treatment of concrete surfaces for better adhesion of protective, anticorrosive, resilient and waterproof coatings.
- Treatment of moist concrete surfaces for better adhesion of synthetic resin floorings
- Treatment of moist walls in order to ensure adhesion of waterproofing coatings
- Encapsulation and consolidation treatments on fireproof and insulation coatings
- Surface repairing prior to application of self-levelling products
- Surface treatment and waterproofing of industrial water systems (fire water tanks, piping, etc)

### CERTIFICATIONS

- CE Marking
- EN 13813 SR-B4, 0-AR0,5-IR14,7
- Certificate of resistance to water counter pressure (as per UNI 8298-8)

	
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EN 13813 SR-B4,0-AR0,5-IR14,7	
Synthetic resin coating. Use according to the relevant Data Sheet.	
Fire resistance	B <sub>s</sub>
Emission of corrosive substances	SR
Water permeability	NPD
Wear resistance (BCA)	AB 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	Component C
<b>Chemical description</b>	Waterbased polyamine hardener	Modified epoxy resin	White cement composition
<b>Physical state</b>	Liquid	Liquid	Solid dust
<b>Packaging</b>	Plastic container 9.62 kg	Metal container 2.88 kg	Metal container
<b>Flash point</b>	>120°C	>120°C	n.a.
<b>Colour</b>	Amber	Colourless or slightly yellow	gray
<b>Non-volatile content (%) approximate</b>	45%	100%	100%
<b>Density</b>	1.0 g/cm <sup>3</sup> (23°)	1.14 g/cm <sup>3</sup> (25°)	1.3 g/cm <sup>3</sup> as dust
<b>Viscosity</b>	50 mPa.s (20°C)	150 mPa.s (20°C)	n.a.
Approximate values Brookfield			
<b>VOC content</b>	<25 g/L, <0.5%	<2 g/L, 0.5%	n.a.
<b>Mixing ratio</b>	A=100, B=30 C=250 by weight A=100, B=26 C=200 by volume		
<b>Mixture density</b>	1.8 g/cm <sup>3</sup>		
<b>Mixture properties</b>	1,1 g/cm <sup>3</sup> at 23°C Colour: cream Non-volatile content: 86%		

<b>Pot life approximate</b>	40 minutes (22°C)
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<b>Storage</b>	Keep between 10° and 30°C. Frost sensitive. Component B 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
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<b>Use before</b>	12 months after manufacturing date.
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#### INFORMATION ON THE FINAL PRODUCT

<b>Final state</b>	Hard, rigid slab
<b>Colour</b>	off white, gray
<b>Hardness Shore</b>	80D
<b>Water permeability UNE-ISO 7783-2, 200 micron</b>	>100 g/m <sup>2</sup> /d
<b>Adhesion strength</b>	>3,5 MPa
<b>Counterpressure resistant</b>	ca 10 bar ASTM D4541 1000 kPa, 72 h, at 2 kg/m <sup>2</sup> thick. (UNI 8298-8)

### SUPPORT REQUIREMENTS

Concrete surfaces must be previously prepared by scarifying or any other suitable means to obtain a rugged and clean surface. Remove all dust and loose material before using. Concrete strength must be >1,5 MPa. Cut suitable joints spaced along the concrete slab depending on the total surface to be covered, and along all the edges.

### MIXING

Tecnocem Rayston is a 3-component ready to use.

1. Mix component A with water (ca 2 litres) and stir until homogenisation.
2. Pour component B into the above mixture and stir thoroughly.
3. Once a homogeneous A-B-water is obtained, add component C and stir until a uniform, free of slumps, paste is obtained. The product is ready for application.
4. If desired, depending on the application tools used, dilute the product with extra water.

### APPLICATION

Tecnocem Rayston can be applied by brush, roller spreader or trowel.

Depending on the intended use, the product can be applied as such, diluted with water or mixed with fillers (quartz sand (0,3-0,6 mm)). Dilutions and addition of fillers must be done after mixing all three components.

Avoid application on very wet, soaked, surfaces. The purpose of Tecnocem Rayston is to provide a regular smooth support that offers protection against water pressure.

Tecnocem Rayston, when applied on wet walls, or in the presence of capillary water pressure, forms a vertical barrier where many different coatings can be applied onto.

On regular and not very wet surfaces, a diluted coat (10-30% water) of Tecnocem Rayston is normally suitable (total consumption 1000 g/m<sup>2</sup> each coat)

On very porous surfaces it is advised to apply a diluted coat (50% water) of Tecnocem Rayston on the support and wait 2 hours before resuming work with further Tecnocem Rayston application.

On irregular supports, consumption can increase up to 1500 g/m<sup>2</sup>, with less water dilution required. When considering a 2 mm thickness on very irregular supports, use the material without dilution, with an expected consumption of 1000 to 3000 g/m<sup>2</sup>.

On very wet surfaces, with water counterpressure, always apply, after the initial coat, a final Tecnocem Rayston coat, by roller, at 500 g/m<sup>2</sup>.

## Cementitious epoxy

No treatment with Tecnocem Rayston must be coated before 48 hours after application (at 20°C, 60% rh) or before a perfect cure is observed (check with appropriate means). If humidity is higher or unfavourable conditions are present, wait at least 6 days.

Expected consumption: 2 kg/m<sup>2</sup> each mm thick.

### CURING TIME

Conditions	Curing time
22°C, 50% rh	touch dry: 1-2 h Rain proof: 9-12 h Recoatible: 48 h minimum Final cure: 10 days minimum

### RETURN TO SERVICE

Final cure requires 10 days, approx

### QUESTIONS AND ANSWERS

Can it be thickened?

Yes, for vertical application, use Thickening Additive.

### TOOL CLEANING

Use water, before curing.

### SAFETY

Component B contains epoxy components. Always follow instructions 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..

### 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.**