

MICROLYMER EP

RAYSTON
products



Water-based epoxy coating with anti-bacterial and anti-fungi properties

DESCRIPTION

Two-component epoxy coating suitable for concrete floorings where anti-bacterial and anti-fungi activity is required. Impervious to liquid water but permeable to vapour, it allows adequate substrate transpiration, preventing water accumulations and blisterings.

It is delivered as a pre-dosed kit, pigmented and ready to mix and use. An unpigmented version for application as a clear coat (varnish) is also available.

APPLICATIONS

Pigmented coating, easy to apply. It can be used even in slightly moist surfaces or where some residual moisture remains.

- Industrial floorings
- Poorly ventilated areas
- Warehouses

CERTIFICATIONS

EN 13813 SR-B4, 0-AR0, 5-IR14, 7



Microorganism resistance evaluated according to ISO 846 and antibacterial activity evaluated according to ISO22196

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B								
Chemical description	Water-based polyamine hardener	Modified epoxy resin								
Physical state	Liquid	Liquid								
Packaging	Pigmented. Plastic container 21,4 kg 4,3 kg	Pigmented. Plastic container 3,6 kg 0,7 kg								
	Clear metal container 12 kg 6 kg	Clear: Metal container 4 kg 2 kg								
Non-volatile content (%)	Pigmented: 57% Clear: 26%	Pigmented and clear: 100%								
Flash point	>120°C	>120°C								
Colour	Pigmented or clear	Colourless, slightly yellow								
Density	<table border="1"><thead><tr><th>Temp (°C)</th><th>Density (g/cm3)</th></tr></thead><tbody><tr><td>25</td><td>1.30-1.45(pigm.) 1.03 (clear)</td></tr></tbody></table>	Temp (°C)	Density (g/cm3)	25	1.30-1.45(pigm.) 1.03 (clear)	<table border="1"><thead><tr><th>Temp (°C)</th><th>Density (g/cm3)</th></tr></thead><tbody><tr><td>25</td><td>1.14</td></tr></tbody></table>	Temp (°C)	Density (g/cm3)	25	1.14
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Viscosity

approximate Brookfield

Temp (°C)	Pigmented		Temp (°C)	Clear	
	Temp (°C)	Viscosity (.s)		Temp (°C)	Viscosity (.s)
30	1000-2000	35	60		
20	1100-2500	25	170		
10	3000-6000	15	375		
		5	710		
35	1800				
25	2400				
15	4200				
5	11000				

VOC Content

<25g/L, <0,5%
Pigmented
7g/L, 0,7%, clear

A/B mixing ratio

Pigmented
A=100, B=17 by weight
A=100, B=21 by volume
Clear
A=100, B=33 by weight
A=100, B=30 by volume

Mixture properties

Pigmented version:

1,30 g/cm³ at 23°C
800-1000 .s at 23°C

Colour: pigmented

Non-volatile content: 63%

Clear version:

Density :1,02 g/cm³ at 20°C
Viscosity: 4700 .s at 20°C

Colour: milky white

Non-volatile content: 44%

Pot life

Approximate

Temp (°C)	Pot life, pigmented (100g, min)	Pot life clear (100,min)
5	200	120
20	150	90
35	100	60

Storage

Keep at temperatures between 10°C 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.

Use before

12 months after manufacture date.

INFORMATION ON THE FINAL PRODUCT

Final state	Rigid, uniform film, semi-glossy				
Colour	Pigmented. Available colours are RAL 1001, 3009, 5015, 6021, 7001, 7011, 9003, 9004, 1018, 3001, 6002, 8001. Other colours or unpigmented (neutral) versions available under request.				
Film Density	1,4 g/cm ³				
Hardness (shore)	65D				
UV resistance	This product can change colour slightly under sunlight, with no impairment of its mechanical properties				
Adhesion	<table border="1"><thead><tr><th>Surface</th><th>Adhesion ()</th></tr></thead><tbody><tr><td>Concrete</td><td>4,0</td></tr></tbody></table>	Surface	Adhesion ()	Concrete	4,0
Surface	Adhesion ()				
Concrete	4,0				
Use temperature	80-85% (at 60°)				
Antibacterial activity	Staphylococcus aureus ATCC 6538P > 99,99 % Escherichia coli ATCC 8739>99.99%				
ISO22196:2011					

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.

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%. 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.



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MIXING PROCEDURES

Stir and homogenise thoroughly component A and B using a low-speed stirrer. The mixture turns to a homogenous and fluid milky solution. Water (up to 10%) may be added if deemed necessary for ease of application.

Do not mix more material than the amount usable within the pot life window.

APPLICATION AND RECOMMENDED AMOUNTS

Use brush, roller or airless spraying equipment. Usual consumption is 150 g/m² for each coat.

CURING TIME

Applications 150 g/m² thick.

Conditions	Touch to Dry (h)
35°C, 25% rh	2
35°C, 10% rh	2
20°C, 10% rh	10
20°C, 40% rh	15
20°C, 90% rh	20
5°C, 50% rh	48
5°C, 20% rh	30
5°C, 80% rh	60

REAPPLICATION

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

RETURN TO SERVICE

The applied coating is resistant to light traffic in the first 24-48 hours, depending on ambient conditions. Maximum hardness is achieved after 7 days.

TOOL CLEANING

Cleaning of tools contaminated with both components can be done with water, before hardening.

SAFETY

Epoxy components of component B are potentially sensitizing. Component A is irritant. 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. If the containers 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 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.

