

RAYSTON FLEX 90

RAYSTON
products



Modified polyurea mastic for joint filling

DESCRIPTION

Rayston Flex 90 is a 2-component modified polyurea resin, which cures very fast into an elastic material. This product can be used for expansion joint filling in concrete flooring.

APPLICATIONS

Floor joint and fissure filling.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION		
	Component A	Component B
Chemical description	Polyol/Polyamide	Aromatic isocyanate prepolymer
Physical state	Liquid	Liquid
Packaging	Cartridge	Cartridge
Non-volatile content (%)	Approx 100%	100%
Flash point	>100°C	>100°C
Colour	Dark yellow	Slightly yellow
Density	1.05 g/cm ³ 25°C	1.12 g/cm ³ 25°C
Viscosity approximate Brookfield	750 mPa.s 25°C	750 mPa.s 25°C
VOC (g/L i %)	<2g/L, <0,2 %	0
A/B mixing ratio	A=1, B=1.12 by weight A=1, B=1 by volume	
Density and viscosity of the mixture	Fast polymerization. See Pot life data	
Colour	Dark yellow	
Pot life	Gel time mixture A+B (20 g) 16 s at 25°C 7 s at 60°C	
Storage	Keep between 10° y 30°C (recommended).	
Use before	12 months after manufacture, provided it is kept in its sealed container.	

INFORMATION ON THE FINAL PRODUCT		
Final state	Solid elastomeric membrane	
Colour	Variable, depending on the chosen pigmentation. For colours available, please contact Krypton Chemical.	
Hardness (shore)	90A/40D (ISO 868)	
Tear strength	69 N/mm (ISO 34-1 Method B)	
Mechanical properties	Elongation at break: 400% Tensile strength: 15 MPa (EN-ISO 527-3)	
UV resistance	Good resistance to UV-induced degradation. Aromatic polyureas undergo change of colour under sunlight. Additional UV protection can be achieved by application of a Impertrans or colodur topcoat.	
Abrasion resistance	Taber, CS17, 1000 c, 1kg: 25mg	
Adhesion strength	Substrate	Adhesion strength (MPa)
	Concrete (EP 100 primer)	5.6
	Steel (PU primer)	3.6

SUPPORT REQUIREMENTS

In order to achieve a good penetration and bonding, support must be:

1. Flat and levelled
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

RECOMMENDED ENVIRONMENTAL CONDITIONS

Support temperature should be between 10°C and 40°C. Relative air humidity should be less than 85%.

SUPPORT PREPARATION

Joints must be clean and free from water, oils or greases that could impair adhesion. Open and clean joints before filling.

No primer is specifically needed.

MIXING

Shake gently both cartridges before use.

APPLICATION GUIDELINES

Rayston Flex 90 must be applied using a suitable pumping portable pumping machine.

It is recommended to fill completely the joints and remove overfilling material at the surface level. Rayston Flex 90 can be cut up to 60 s after application using a steel blade.

Do not interrupt the application process. Due to the product's fast curing time, it hardens quickly, which may require replacement of the nozzle.

Contact Krypton Chemical for more detailed technical information.

Spray application. use static mixer for spray application with non-return valve:



Application joints. use static mixer joints 1:1:



Achievable joint length with a 1.7kg cartridge (in meters)
Density 1.095

Joint depth in mm	Joint width in mm				
	4	6	8	12	20
4	87.6	58.4	43.8	29.2	17.4
6	58.4	39.0	29.2	19.4	11.6
8	43.8	29.2	21.8	14.6	8.6
10	35.0	23.3	17.4	11.6	6.9

CURING TIME

Rayston Flex 90 cures to touch after a few minutes after application.

Approximate hardness values are provided as reference only (1 mm, polypropylene support, 25°C 50% RH)

Time	Hardness (shore A/D)
10 min	74/27
20 min	77/29
1 hr	80/30
24 hr	88/35



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Latest update: 25/08/2025

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RETURN TO SERVICE

Under most usual conditions (25°C, 50% rh), the material is resistant to rain droplets after 15 minutes, and able to resist light pedestrian traffic in 1 hour. After 2 days, 90% of the final properties are reached.

FAQ

Problem	Question	Cause	Solution
product does not cure	AB ratio is correct?		Check and correct machine operation
Colour change	Exposed to sunlight?	UV-reaction	Use a last coat in dark grey or red

SAFETY

Component B contains isocyanates. Always follow the safety instructions in the Material Safety Data Sheet. As a general rule, a good ventilation and/or respiratory protection is needed (combined organic vapor filters+particles) along with protective clothing. This product must be used only for the applications here described. This product is intended for industrial and professional use. It is not suitable for DIY-type applications.

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 with no knowledge of potentially dangerous reactions.

Component A and B may be mixed on a 1/1 ratio to get an inert material, but never do it 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 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.