

RAYSTON FLEX 70

RAYSTON
products



Polyurea mastic, mechanically applied.

DESCRIPTION

Rayston Flex 70 is a highly elastic 2-component resin, modified-polyurea based, designed for joint and fissure filling. Supplied as prefilled plastic cartridges, it is applied using a dedicated hand-operated pumping machine supplied by Krypton Chemical.

APPLICATION

Expansion and working joint filling. Designed for outdoor use (roofing, water treatment structures, bridge decks, foundations and wide-movement structures. To be used where high throughput and fast application and curing is a must.

PROPERTIES

- Highly elastic thermoset elastomer
- High chemical and mechanical resistance
- Quick cure
- Solvent free
- Coticable with waterproofing membranes supplied by Krypton Chemical.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION		
	Component A	Component B
Chemical description	Polyamine	Aromatic isocyanate prepolymer
Physical state	Liquid	Liquid
Packaging	Cartridge	Cartridge
Non-volatile content (%)	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	750 mPa.s 25°C	800 mPa.s 25°C
Approximate		
Mixing ratio A/B	A=1, B=1.05 by weight A=1, B=1 by volume	
Density and viscosity of the mixture	Fast polymerization. See Pot life data	
Colour	Grey	
Pot life	Gel time mixture A+B (20 g) 12 s at 25°C	
Approximate	Tack free in 20 seconds.	
Storage	Keep between 10° y 30°C.	
Use before	12 months after the manufacture date, provided it is kept in its sealed container.	

INFORMATION ON THE FINAL PRODUCT

Final state	Solid elastomeric mastic
Colour	Variable according to pigmentation
Hardness	
Shore	90A/35D
ISO868	
Mechanical properties	Elongation at break: 690% Tensile strength: 20 MPa (UNE EN ISO 527-1/3) Tear strength: 46 N/mm (ISO 34-1 method B)
UV resistance	Good resistance to UV-induced degradation. Aromatic polyureas undergo a change of colour under sunlight. This change does not affect its mechanical properties. Additional UV protection can be achieved by application of an aliphatic topcoat
Water vapour resistance factor	$\mu = 304$ (EN-ISO 7783: 2012)
Liquid water permeability	$W = 0,02 \text{ Kg/m}^2 \times \text{h}^{0,5}$ (EN-1062-3: 2018)

Watertightness (60kpa, 6 meters of water column)	Watertight (EN-1928)
Foldability at low temperature (-45°C)	Does not break or crack (EN-495-5)
Resistance to 10 mg (Taber, CS-10, 1000 c, 1 kg) abrasion	10 mg (Taber, CS-10, 1000 c, 1 kg)

SUPPORT REQUIREMENTS

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

1. Flat and leveled
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

Air temperature should be between 10°C and 40°C. Relative air humidity should be less than 70%.

SUPPORT PREPARATION

Joints must be clean and free from water or other compounds such as oils or greases that could interfere adhesion. Open and clean joints before filling. No specific primer is necessary.

MIXING

Shake gently both cartridges before use.

APPLICATION GUIDELINES

Rayston Flex 70 must be applied using a 2-component air-driven portable pumping machine.

It is recommended to fill completely the joint, overfilled material can be cut away at the floor level immediately after application.

Rayston Flex 70 can be cut after 60 s using a steel blade.

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:



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Achievable joint length with a 1.7kg cartridge (in meters)
Density 1.085

Joint depth in mm	Joint width in mm				
	4	6	8	12	20
4	88.2	58.8	44.1	29.5	17.6
6	58.8	39.2	29.5	19.6	11.8
8	44.1	29.5	22.1	14.7	8.8
10	35.3	23.6	17.6	11.8	7.0

Note: The indicated yields are theoretical, and don't include losses. It is recommended to carry out a previous test on site to obtain exact performances.

CURING TIME

Approximate hardness values are provided as reference only (2 mm, polypropylene support, 20°C 50% RH)

Time	Hardness shore A
45 min	53
3 hours	56A
1 day	65A

RETURN TO SERVICE

Under most usual conditions (25°C, 50% rh), the membrane is resistant to rain droplets after 5 minutes, and able to resist light pedestrian traffic in 1 hour. After 1 day, more than 90% of the final properties are reached.

FAQS

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

LEED-requirements compliant.

EQ Credit 4.2, Low emissions materials: Paints and Coatings.

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 in order 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 Technical 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.



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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 Technical Data Sheet supersedes previous versions.