

# 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 pre-filled 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
- Compatible with waterproofing membranes supplied by Krypton Chemical.

## TECHNICAL DATA

### INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
<b>Chemical description</b>	Polyamine	Aromatic isocyanate prepolymer
<b>Physical state</b>	Liquid	Liquid
<b>Packaging</b>	Cartridge	Cartridge
<b>Non-volatile content (%)</b>	100%	100%
<b>Flash point</b>	>100°C	>100°C
<b>Colour</b>	Dark yellow	Slightly yellow
<b>Density</b>	Temperature (°C) Density (g/cm <sup>3</sup> ) 25 1.05	Temperature (°C) Density (g/cm <sup>3</sup> ) 25 1.12

	Temperature (°C)	Viscosity (mPa.s)	Temperature (°C)	Viscosity (mPa.s)
<b>Viscosity</b> Approximate	20	750	25	800

<b>Mixing ratio A/B</b>	A=1, B=1.05 by weight A=1, B=1 by volume
<b>Density and viscosity of the mixture</b>	Fast polymerization. See Pot life data
<b>Colour</b>	Grey
<b>Pot life</b> Approximate	Gel time mixture A+B (20 g) 12 s at 25°C Tack free in 20 seconds.
<b>Storage</b>	Keep between 10° y 30°C.
<b>Use before</b>	12 months after manufacture date, provided it is kept in its sealed container.

### INFORMATION ON THE FINAL PRODUCT

<b>Final state</b>	Solid elastomeric mastic
<b>Colour</b>	Variable according to pigmentation

<b>Hardness Shore ISO868</b>	90A/35D
<b>Mechanical properties</b>	Elongation at break: 690% Tensile strength: 20 MPa (UNE EN ISO 527-1/3)  Tear strength: 46 N/mm (ISO 34-1 method B)
<b>UV resistance</b>	Good resistance to UV-induced degradation. Aromatic polyureas undergo 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
<b>Water vapour resistance factor</b>	$\mu = 304$ (EN-ISO 7783: 2012)
<b>Liquid water permeability</b>	$W = 0,02 \text{ Kg/m}^2 \times \text{h}^{0,5}$ (EN-1062-3: 2018)
<b>Watertightness (60kpa, 6 meters of water column)</b>	Watertight (EN-1928)
<b>Foldability at low temperature (-45°C)</b>	Does not break or crack (EN-495-5)
<b>Resistance to 10 mg (Taber, CS-10, 1000 c, 1 kg) abrasion</b>	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/mm<sup>2</sup>).
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.

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

Joint depth in mm	Joint width in mm				
	4	6	8	12	20
4	99.7	68.4	50.7	34	19.8
6		45.1	46.6	22.4	13.8
8			25.4	16.8	9.9
10				13.8	8.6



### KRYPTON CHEMICAL SL

C/ Martí i Franquès, 12 - Pol. Ind. les Tàpies  
43890 - l'Hospitalet de l'Infant - Spain  
Tel: +34 977 822 245 - Fax: +34 977 823 977

www.kryptonchemical.com - rayston@kryptonchemical.com

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**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 emissin 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 contains still have some material left, do not mix with other product with no knowledge of potential 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.

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.**

