

RAYSTON SPRAY 5090A

RAYSTON
products



Sprayed, hot-applied polyurea membrane

DESCRIPTION

Rayston Spray 5090A is a 2-component modified polyurea resin, which cures very fast into an elastic material.

APPLICATIONS

Seamless polyurea membrane.

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	Temperature (°C) Density (g/cm ³)	Temperature (°C) Density (g/cm ³)
	20 1.03	20 1.12
	60 1.01	60 1.10
Viscosity	Temperature (°C) Viscosity (mPa.s)	Temperature (°C) Viscosity (mPa.s)
	20 1800	20 2000
	60 250	60 400
VOC (g/L and %)	<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 mastic
Colour	Available colours: light grey, dark grey, rust red, blue (may darken during storage and exposure to sunlight). Other colours under request.
Hardness (Shore)	88A/42D (ISO 868)
Water vapour permeability	μ=2000, 14g/m ² day, (EN 1931)
UV resistance	Good resistance to UV-induced degradation. Aromatic polyurethanes undergo change of colour under sunlight. This change does not affect their mechanical properties. Additional UV protection can be achieved by application of a Impertrans or colorud topcoat.
Thermal resistance	Stable up to 80°C

CHEMICAL RESISTANCE

Permanent contact (0=worst, 5=best)

Chemical	Conditions	Result
Water	15d, 80°C	5
Brine	5d, 80°C	5
Diesel	16d, 80°C	5
Xylene	7d, 80°C	1
Ethyl acetate	7d, 80°C	0
Isopropyl alcohol	7d, 80°C	0
Sodium hydroxide (40g/L)	7d, 80°C	5
Hydrogen peroxide (33%)	7d, 25°C	4
Ammonia (3%)	7d, 80°C	5
Sulfuric acid (10%)	7d, 80°C	4
Hydrochloric acid conc.	7d, 80°C	0
Bleach	7d, 80°C	4
Sulfamic acid (8.5%)	7d, 60°C	4

SUPPORT REQUIREMENTS

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. Open and clean joints before filling. No primer is specifically needed.

MIXING

Shake gently both cartridges before use.

APPLICATION GUIDELINES

Rayston Spray 5090A 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 Spray 5090A can be cut up to 60 s after application using a steel blade.

Contact Krypton Chemical for more detailed technical information.

CURING TIME

Rayston Spray 5090A 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)
15 min	30
30 min	47
1 hr	60
3 hr	72
8 hr	79
24 hr	82
7 days	87



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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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 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 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" 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.



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