

# ADHESIVE PU 1K

Single-component polyurethane adhesive for construction applications

RAYSTON  
products



## DESCRIPTION AND APPLICATIONS

Highly resistant polyurethane adhesive.

- General construction material bonding
- Insulation
- Synthetic flooring applications

## TECHNICAL DATA

### INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description	100% solids single-component aromatic polyurethane
Packaging	Metal container 5, 10, 25 kg.
Physical state	Liquid
Non-volatile content	100%
Flash point	>120°C
Colour	Light yellow
Density	1.05 g/cm <sup>3</sup> (20°C)

Viscosity	Approximate values	
(Brookfield)	Temperatures (°C)	Viscosity (cP)
	5	20000
	15	7000
	25	3000
	35	1000
Pot life	3 h (1 kg, 20°C, 50% rh) 5 h (1kg, 5°C, 60% rh)	

Storage	Keep at a temperature below 35°C, away from moisture. Product may be used up to 12 months after manufacture in its sealed original container.
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### INFORMATION ON THE PRODUCT FINAL

Final state	Solid PU
Colour	Yellow
Hardness (Shore)	87A
Density of film	1,05 g/cm <sup>3</sup>

Mechanical properties	Maximum elongation: 190% Stress: 6.1
Tear strength	6,1 N/mm
UV resistance	A colour change is expected due to its aromatic polyurethane composition. This discolouration does not affect its mechanical properties.

Thermal resistance	Stable up to 80°C		
Chemical resistance	Permanent contact (0=worst, 5=best)		
	Chemical	Test conditions	Results
	Water	24 h, 25°C	5
	Salt water	24 h, 90°C	5
	Hydrochloric acid	200 g/l, 24h,25°C	4
	Solution	200 g/l, 2 h, 80°C	4
		3 g/l. 24h,25°C	5
		3 g/l. 24h,80°C	4
	Sodium hydroxide	40 g/l, 24h, 25°C	5
	Acetone	24 h, 25°C	1
	Ethyl acetate	24 h, 25°C	3
	Xylene	24 h, 25°C	5
	Motor oil	24 h, 25°C	5
	Brake fluid	24 h, 25°C	2

## SUPPORT REQUIREMENTS

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

1. Flat and leveled
2. Coct and cohesive (pull off test must show a minimum resistance of 1,5 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 AMBIENTAL CONDITIONS

Support temperature should be between 10°C and 30°C. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice.

Air temperature must be between 10°C and 30°C. Support moisture should be less than 4% and less than 85% in the air.

High temperature and moisture conditions can lead to bubbling/foaming.

## SUPPORT PREPARATION

Concrete substrates must be prepared mechanically using an abrasive blast or scarifying to lift the surface and achieve an open pore.

The substrate is printed and leveled until a regular surface is achieved. Sharp irregularities are removed with a polisher. Remove all the dust and loose material from the surface with a brush or broom. Then apply the product according to the recommended systems.

## APPLICATION GUIDELINES

Apply the product in wide strips and spread quickly. Use 300 to 500 g/m<sup>2</sup>. It is recommended to wait until some thickening is observed before application of the second surface. Apply the second surface to bond and keep a suitable pressure during all the curing time. Caution. Product is self-leveling. If intended to be applied on sloped or vertical surfaces, use thickening additive to prevent dripping.

## CURING TIME

Curing time is dependent on the local conditions. Curing rate increases as temperature and humidity rises. At 20°C 50%rh: 24 hours

## RETURN TO SERVICE

At usual conditions, the rubber flooring is resistant to light traffic after 48 hours. It is recommended to open to general use after 6-7 days.

## TOOL CLEANING

Liquid Adhesive PU 1k can be cleaned with Rayston Solvent. Once hardened, it cannot be dissolved.

## FAQ

Question	Answer
	For all the on-site application, it is not recommended to add water for speeding up the curing process.
Can I add water?	Excess of water will cause foaming and loss of mechanical properties.

## SAFETY

Adhesive PU 1k contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, suitable ventilation must be ensured and all contact with skin prevented. 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 taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorized waste manager. If there is some residual product in the containers, do not mix it with other substances without checking for possible dangerous reactions.



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## 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.**



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