

# RUBBER CRUMB BINDER 4000

RAYSTON  
products



## Polyurethane binder for rubber crumb

### DESCRIPTION

One component liquid aromatic polyurethane composition. Suitable for recycled rubber crumb binding, obtaining a coct and cost-effective elastomeric binder, for use in a variety of applications (running track fields, children play grounds, tramway noise dampening, etc.). Best suited for moulding process.

- Low viscosity. Good wetting properties
- Low colour
- Good mechanical and elastic properties. Good tear resistance

### APPLICATION

- Running track fields
- Decorative flooring
- Gardens
- Roundabouts
- Slopes
- Terraces
- Safety flooring
- Playgrounds
- Recreational areas

### ADVANTAGES

Elastic and seamless coating, weather resistant and excellent bonding. No reinforcement usually required except at critical points.

### TECHNICAL DATA

#### INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description	100% solids single-component aromatic polyurethane	
Physical state	Liquid	
Packaging	Metal containers, 200 kg	
	Other sizes available on request	
Non-volatile content (%)	100%	
Flash point	>120°C	
Available colour	Light yellow	
Density	1,11 g/cm <sup>3</sup> (20°C)	
Viscosity	Approximate values	
approximate Brookfield		
	Temperature (°C)	Viscosity (mPa.s)
	5	15000
	15	7000
	25	4200
	35	3000
Pot life	1 h (1 kg, 20°C, 50% rh) 2 h (1kg, 5°C, 60% rh)	
Storage	Keep it at a temperature below 35°C, away from moisture	
Use before	Product may be used up to 12 months after manufacture in its sealed original container.	

#### INFORMATION ON THE FINAL PRODUCT

Final state	Solid elastomeric membrane
Colour	Yellowish
Hardness (shore)	79A
Density of film	1,11 g/cm <sup>3</sup>
Mechanical properties	Maximum elongation: 101%
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 180°C
Chemical resistance	Permanent contact. (0=worst, 5=best)

Chemical	Test conditions	Result
Water	24h, 25°C	5
Salt water	24h, 90°C	5
Hydrochloric acid solutions	200 g/l, 24h, 25°C	4
	200 g/l, 2h, 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	24h, 25°C	1
Ethyl acetate	24h, 25°C	3
Xylene	24h, 25°C	5
Motor oil	24h, 25°C	5
Brake Fluid	24h, 25°C	2

Adhesion	Surface	Force (MPa)
	Concrete	2,0
	Ceramics	2,6
	Polyurethane Foam	1,4

### RECOMMENDED COMBINATIONS

Use in a 2% to 10% ratio related to the crumb binder mass.

### APPLICATION GUIDELINES

Add Rubber Crumb Binder 4000 to the corresponding rubber amount, using a suitable mixer, allowing mixing until complete homogenization and wetting. Pour the resulting mixture into the mould and coct it according to the desired final properties. Cure in an oven at a 100°C minimum temperature for as long as needed.

### CURING TIME

Curing time is dependent on the temperature and geometry of the mould. The following table gives a rough estimation of the curing time under diverse conditions for a 10 mm piece.

Temperature (°C)	Dry to touch (h)
130	14
120	16
100	20

### RETURN TO SERVICE

After demoulding, installation is possible. A further storage time of 5 to 7 days is advised it.

### TOOL CLEANING

Liquid Rubber Crumb Binder 4000 can be cleaned with Rayston Solvent. Once hardened, it cannot be dissolved.

### FAQ

Question	Answer
Can I add water?	Foaming will occur, but this can be not relevant inside mould and under pressure. Study carefully before proceeding.

### SAFETY

Rubber Crumb Binder 4000 contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, a 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.

### OTHER INFORMATION



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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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