RAYSTON RCB-581A

Polyurethane binder for rubber crumb

DESCRIPTION

UV stable version of Rayston RCB-580. Suitable for recycled rubber crumb binding, obtaining a coct and cost-effective elastomeric binder, for use in varied applications (tree pits, playing grounds, rail applications, etc.). Best suited for on-site applications. Its enhanced UV resistance makes it more suitable for topcoat applications than the regular Rayston RCB-580 and the version.

- 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 aliphatic polyurethane
Physical state	Liquid
Packaging	Metal containers 25 kg, 210 kg
Non-volatile content	100%
Flash point	>200ºC
Color	Colourless
Density	1,1 g/cm^3 (20ºC)
Viscosity	Temperature (ºC) / Viscosity (mPa.s) 5 / 10000 15 / 5400 25 / 3500 35 / 2000
Pot life	5ºC: 1 h (50 g), 25ºC: 1 h (50 g), 35ºC: 1 h (50 g)
Storage	Keep at a temperature below 35ºC, 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	Colourless
Hardness (Shore)	70A (ISO 868)
Density of film	1,05 g/cm^3
Mechanical properties	Elongation: 130% Stress: 1 MPa
UV resistance	No colour change is expected due to its aliphatic polyurethane composition.
Thermal resistance	Stable up to 80ºC
Chemical resistance	Surface contact, 24h, room temperature (0=worst, 5=best)

Chemical	Result
Water	5
Chlorinated water (1 mg/l)	5
Salt water	5
Methoxypropyl acetate	1
Bleach	5
Diesel	3
Sulphuric acid 30%	3
Isopropyl alcohol	2
Xylene	1
Hydrogen peroxide	4
Sodium hydroxide (40 g/l)	5
Ammonia (3%)	5

RECOMMENDED COMBINATIONS

Primer (Optional)

- Rayston RCB-580, aromatic type (RCB), 250-350 g/m^2, diluted with Solvent Rayston where needed.

Buffer layer (recommended 20 to 100 mm thick)
RCB mixed with recycled SBR rubber crumb (1 to 7 mm particle size) in the mixing ratio:

- SBR rubber: 100 parts
- RCB resin: 12-15 parts

For a 10-mm layer, use 8 kg/m^2 of the above mixture.
Specific thickness depends on the project requirements.

Sealing layer (recommended 10 to 20 mm thick)

- 12-24 hours after buffer layer

A mixture of:

- EPDM rubber (1-4 mm particle size): 100 parts
- Rayston RCB-581A: 18 to 21 parts

For a 10-mm layer, use 8-10 kg/m^2 of the above mixture.

SUPPORT REQUIREMENTS

To achieve a good bonding, support must be:
1.Flat and leveled.
2. Compact and cohesive (pull off test must show a minimum resistance of 1,5 N/mm^2).
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 10ºC and 30ºC. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice.
Air temperature must be between 10ºC and 30ºC. Support moisture should be less than 4% and less than 85% in the air.
High temperature and moisture conditions can lead to bubbling/foaming.

APPLICATIONS GUIDELINES

Concrete supports must be prepared using an abrasive treatment and priming. Add the product to the recommended amount of rubber crumb and mix for some minutes, until total homogenization and wetting. The mixture is the poured on the surface, spreaded and leveled using suitable spreaders.

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CURING TIME

Curing time is dependent on the environmental conditions. Curing rate increases with temperature and humidity rises. The following table gives a rough estimation of the curing time under diverse conditions for a 1 mm coat.

Temperature (ºC)	Dry to touch (h)
15	>10
20	11
40	4,5

RETURN TO SERVICE

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

TOOL CLEANING

Rayston RCB-581A can be cleaned with Rayston Solvent. Once hardened, it cannot be dissolved.

FAQ

Question	Answer
Can I add water?	For all the on-site application, it is not recommended to add water for speeding up the curing process. Excess of water will cause foaming and loss of mechanical properties.
Why color changes if it is “UV-resistant”?	Some rubbers give a coloration to the resin when mixed. Use only suitable color-trouble free rubber crumbs.

SAFETY

Rayston RCB-581A contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a 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

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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