

PAVISTONE 1K HV

Aliphatic polyurethane binder

RAYSTON
products



DESCRIPTION AND APPLICATIONS

Pavistone 1k HV is a polyurethane aggregate binder for pavements that gives for a smooth floor, modern, tough, low maintenance, porous or semi porous finish, depending on the type of aggregates used. The surface finish is a seamless, flexible, and resistant to cracking floor. Product is colourless.

APPLICATIONS

- Paths
- Parking decks
- Bike lanes
- Fences
- Ramps
- Pedestrian areas
- Parks
- Commercial areas
- Roads
- Footbridges
- Residential areas

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description	Solventless aliphatic polyisocyanate	
Physical state	Liquid	
Packaging	Metal container	
	5 kg	
	25 kg	
	200 kg	
Non-volatile content	100%	
Flash point	100°C	
Colour	Whitish	
Density	1.12 g/cm ³ (25°C)	
Viscosity	2300 mPa.s (25°C)	
Pot life	Conditions (100g filter + 5g resin)	Pot life (min)
	20°C, 40% hr	90-120
Storage	Keep between 10° y 30°C, protected from moisture.	
Use before	12 months after manufacturing date.	

INFORMATION ON THE FINAL PRODUCT

Final state	Elastomeric solid binder
Colour	Colourless
Solid density	1.10-1.15 g/cm ³
Hardness (shore)	55D
Mechanical properties	Elongation at break: 21% Tensile strength: 24 MPa
UV resistance	Colour stable under sunlight
Water absorption	Very low (6 days, 20°C)

CHEMICAL RESISTANCE

Surface contact (24 hours, room temperature, 5=ok, 0= not recommended)

Chemical	Result
White spirit	5
Coffee	5
Isopropyl alcohol	5
Methoxypropyl acetate	5
Gasoline	5
Xylene	5
Sodium hydroxide	5
Ethanol	4

Bleach	5
Trichloroisocyanuric acid	5
Formaline	5
Lubricant oil	5
Hydrogen peroxide	4
Acetic acid (10%)	2
Sulphuric acid (30%)	1
Skydrol	5
Ammonia (3%)	5
Diesel	5

SUPPORT REQUIREMENTS

To achieve a good bonding, support must be:

1. Flat and levelled.
2. Compact and cohesive (pull off test must show a minimum resistance of 1,5 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.

Asphalt supports must be clean and dry.

For more information on treatment of critical spots, consult our technical service.

Edges of the application can be finished with brick, stone, concrete, for a high-quality finish.

RECOMMENDED AMBIENTAL CONDITIONS

- Support temperature should be between 10°C and 25°C.
- At higher temperatures, specific precautionary measures must be taken. At lower temperatures, curing is very slow.
- Please follow manufacturer advice.
- Support moisture should be less than 4%.
- High temperature and moisture conditions can lead to bubbling/foaming.
- Preferred air conditions are 10-30°C and 30-80% rh.

APPLICATION

Homogenise completely by gentle stirring before use. After mixing, Pavistone 1k HV is added to the aggregate mass, using a suitable mechanical mixer. Mix for 2 minutes and spread immediately on the application site. It is important to wet thoroughly all the solids for the same length of time each batch to prevent colour differences. See pot life data for details.

Spread evenly at the desired thickness on the surface using a flat spreader and press gently to obtain a smooth and compact surface.

An advisable practice is to seal the upper surface with a thin coat of pure Pavistone resin to prevent surface wearing off.

Use the following tables for consumption estimates:

PARTICLE SIZE	PAVISTONE (%/kg)	STONE (Stone/thickness/surface)	Quantity of resin / 25 kg of stone
1.25-2.5 mm	6-8% or 960 g/cm ²	16 kg/cm ²	1.5 kg
2.5-5 mm	5-7% or 800 g/cm ²	16 kg/cm ²	1.25 kg
5-8 mm	4-6% or 640 g/cm ²	16 kg/cm ²	1 kg

Aggregate gradation in the mix				Application types
COATING THICKNESS	1.25-2.5 mm	2.5-5 mm	5-8 mm	
	10 mm	10 mm	24 mm	Pedestrian traffic on hard surfaces (concrete, tiles or ceramic)
	20 mm	20 mm	24 mm	Vehicular traffic on hard surfaces (concrete, tiles or ceramic)
	30 mm	30 mm	30 mm	Pedestrian traffic on soft surfaces
	50 mm	50 mm	50 mm	Vehicular traffic on soft surfaces

Some aggregates contain a certain proportion of finer sands that difficult adhesion of the main components. Use clean materials with suitable particle distribution.



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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27/05/2026

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APPLICATION

Apply by spreader. Use of up to 4% of thickening additive is possible for vertical application. Please refer to the Thickening Additive data sheet.

It is advisable to apply a final sealing topcoat made with the same (diluted) resin or Colodur. It is important to prevent excess of sealing product since it will be readily absorbed and will give foamed and discoloured spots.

CURING TIME

Curing time depends strongly on the local conditions. Curing speed will increase with temperature and humidity. The following table gives approximate values for combinations 100 g filler /5 g resin, forming 4 cm thick pieces. Thicker coats will give longer curing times.

Conditions	Touch dry (h)	Total (h)
35°C, 25% rh	5-7	18-24

RETURN TO SERVICE

Under most conditions, light traffic is permitted about 24 to 48 hours after curing.

TOOL CLEANING

Pavistone 1k HV can be cleaned with solvent Rayston. Stains must be cleaned as soon as possible. Hardened product cannot be dissolved.

SAFETY

Pavistone 1k HV 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, component A and B can be mixed, always according to the A/B ratio, and allowed to cure. Do not mix volumes bigger than 5 litres to prevent 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 conducting 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.