

PAVISTONE 1K HV

RAYSTON
products



Aliphatic polyurethane binder

DESCRIPTION

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

- Footpaths
- Car parks
- Cycle lanes
- Fences
- Pavements
- Pedestrian areas
- Theme parks
- Commercial areas
- Roads
- Walkways
- Tree pits
- Design projects

TECHNICAL DATA

PRODUCT INFORMATION 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	Approx. 2500 mPa.s (25°C)	
Pot life	Conditions (100g filter + 5g resin)	
	20°C, 40% hr	90-120 min
Storage	Keep between 10° and 30°C, protected from moisture	
Use before	12 months from the date of manufacture, unopened in its original packaging	

FINAL PRODUCT INFORMATION

Final state	Elastomeric solid binder
Colour	Colourless
Solid density	1.10-1.15 g/cm ³
Mechanical properties	Elongation at break: 21% Tensile strength: 24 MPa
UV resistance	Due to its aliphatic isocyanate nature, it does not change colour when exposed to sunlight
Hardness (shore)	55D
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. Edges of the application can be finished with brick, stone, concrete, for a high-quality finish.

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

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

MIXING AND HOMOGENISATION

The product must be thoroughly mixed before use. Once mixed, Pavistone 1K HV must be added to the aggregates, which have already been placed in a suitable mechanical mixer. Mix the aggregates and resin for 2 minutes, then pour the mixture into a wheelbarrow and take it immediately to the application site (see pot life).



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It is important to ensure that each batch is thoroughly impregnated for the same duration to avoid variations in colour.

APPLICATION GUIDELINES

The material/aggregate must be spread evenly and compacted onto the surface to the desired depth, using a smooth (toothless) trowel or float.

It is advisable to apply a final seal coat using the same diluted resin or Colodur. In this case, care must be taken to avoid an accumulation of product at the point of application. Any excess resin absorbed by the surface could foam and cause stains and variations in colour on the floor.

Use the following tables for consumption estimates:

PARTICLE SIZE	PAVISTONE (%/kg)	STONE (Stone/thickness/surface)	Quantity of resin / 25 kg of stone
2-6 mm	5-7% or 800 g/cm ²	17 kg/cm ²	1.25 kg
6-8 mm	4-6% or 640 g/cm ²	17 kg/cm ²	1 kg

Application types		Aggregate gradation in the mix	
	2-6 mm	6-8 mm	
Coating thickness	10 mm	24 mm	Pedestrian traffic on hard surfaces (concrete, tiles or ceramic)
	30 mm	30 mm	Pedestrian traffic on soft surfaces

Note: For vehicle traffic, please contact Krypton's Technical Department.

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

CURING TIME

Curing time depends heavily on the prevailing environmental conditions. The drying rate increases as temperature and humidity rise. Greater thicknesses result in longer curing times.

The following values refer to applications of 100g of aggregate and 5g of resin in a 4cm-thick block:

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

Any residue from Pavistone 1K HV can be cleaned off using Rayston PU Solvent. Once set, the product cannot be dissolved, except with special stripping agents. Any Pavistone 1K HV stains must be cleaned up promptly.

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.

ENVIRONMENT

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.

FURTHER INFORMATION

The information contained in this Technical 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.