PAVIFLOOR

Self-leveling polyurethane resin for flooring applications

DESCRIPTION AND APPLICATIONS

Pavifloor is a 2-component polyurethane product for self-levelling flooring applications such as:

- Homes and residences.
- Industrial buildings and warehouses (when resistance to heavy traffic of trucks and forklifts is required).
- Corridors.
- Offices.
- Restaurants.
- Rooms in hospitals and residences.
- Commercial areas / trade shows

PROPERTIES

- Self-levelling, resilient flooring material
- Fast processing and curing.
- Solvent free.
- Resistant to abrasion and scratching.

CERTIFICATIONS

- CE Markings. Independent Applus laboratory, document Nº 09/32301291
- Taber abrasion. Independent Applus laboratory.
- Fire exposure. Independent laboratory FCBA according to EN 13501-1: 2007.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	Polyol and mineral fillers mixture	Solventless polyisocyanate
Physical state	Liquid	Liquid
Packaging	Metal container 21,0 kg 4,2 kg	Metal container 4,0 kg 0,8 kg
Non-volatile content	Approx 100%	100%
Flash point	>100ºC	>100ºC
Colour	Light gray. Other colours possible.	Dark brown

Density	Temperature (ºC)	Density (g/cm³)	Temperature (ºC)	Density (g/cm³)
	25	1.51	25	1.20

Viscosity	Temperature (ºC)	Viscosity (mPa.s)	Temperature (ºC)	Viscosity (mPa.s)
	25	6000	25	90

A/B mixing ratio	A=100, B=19 by weight A=100, B=24 by volume

Initial mixture properties	Temperature (ºC)	Density (g/cm³)
	25	1,46

Pot life (approximate)	Temperature (ºC)	Pot life (100g, min)
	20	40

Colour	Light gray. Other colours possible.
Storage	Keep between 10ºC and 30ºC protected from moisture
Use before	12 months after manufacturing date, in its unopened container

INFORMATION ON THE FINAL PRODUCT

Final state	Solid flexible polyurethane membrane
Colour	Standard colour is light gray. Other colours available on request.
Solid density	1,44 g/cm³
Hardness (shore)	65D
Mechanical properties	Maximum elongation: 36% Maximum tensile strength: 8.3 MPa
Chemical resistance	Permanent contact (5=ok, 0=Not recommended)

Chemical	Concentration	Conditions	Result
Water	-	24h, 20ºC	5
Hydrogen peroxide	30 %	24h, 20ºC	5
Hydrogen peroxide	30%	24h, 40ºC	5
Hydrogen peroxide	30%	2h, 80ºC	4
Sulphuric acid	20%	24h, 20ºC	2
Sulphuric acid	2%	24h, 20ºC	3
Sodium hydroxide	4%	24h, 20ºC	4
Bleach	-	24h, 20ºC	4
Ammonia	-	24h, 20ºC	4
Xylene	-	24h, 20ºC	1
Isopropyl alcohol	-	24h, 20ºC	3
Diesel	-	24h, 20ºC	4

UV resistance	Pavifloor requires an aliphatic PU protection if sunlight exposure is probable. Without this topcoat, colour changes are expected, although they do not iir mechanical properties.
Temperatures of use	Stable between -40ºC and 80ºC
Adhesion strength	Concrete: 1,5 MPa (unprimed), 4,3 MPa (Epoxy primer)
Gloss	75% (at 60º)

SUPPORT REQUIREMENTS

In order to achieve a good degree of penetration and bonding, support must be:
1.Flat and levelled (product is self-levelling)
2. Compact and cohesive (pull off test must show a minimum resistance of 1,4 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.

HUMIDITY AND TEMPERATURE

Air temperature: +10ºC to 30ºC
Relative humidity: less than 60%

PREPARATION

It is essential that you carry out the necessary surface treatment (sanding, shot blasting, etc.) and that the appropriate primer is applied, for example, EP Aquaprimer, EP Primer, Primer H or Epoxy Primer 100. The primer should be dry before application of Pavifloor.

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MIXING

Open container of component A. Stir gently to redisperse fillers and avoid trapping of air. Stir for 1 minute. Pour component B into the A container and continue stirring for 1 minute. Transfer the mixture to a bigger container and check there is no unmixed product left. Wait 1 minute before use.

APPLICATION

Pour the mixture and spread quickly with squeegee or toothed spreader. It is recommended to wear spiked shoes and remove the bubbles by using a spike roller immediately after the spreading, in a crossing pattern, up to 10 minutes after the application.

Assign, depending on the size of the application area, enough personnel to the task for a mixing, application and spreading in a quick and regular way.

RECOMMENDED QUANTITIES

Apply Pavifloor to 3 kg/m^2, giving an approximate thickness of 2 mm.

CURING TIME

Conditions	Walking (h)	Dry to touch (h)
25ºC, 50% rh	24	7

RECOATING

A second application can be done after 24 hours from the curing (walking) of the first one.

RETURN TO SERVICE

Under usual conditions, light pedestrian traffic is allowed the following day. A degree of curing suitable for most uses is achieved in 5 or 7 days.

TOOL CLEANING

Component A and B can be cleaned with solvent Rayston. Cured product cannot be dissolved.

FAQ

Problem	Answer
Bubble/blister formation	Bubbles form easily under not optimal ambient conditions. Do not apply the product in warm and/or humid environments. Ensure correct primer application, with enough thickness to be sure all porosity has been sealed. Under humid conditions, an addition of solvent Rayston (up to 10%) at component A before mixing can help to block moisture pickup. Bubble-affected areas must be sanded and a new fresh coat of Pavifloor applied onto.
Soft spots. Uncured areas	When mixing is not complete, some pockets containing unmixed component A remain, which are poured together with the mixed mass. These areas remain as a soft spot, sometimes under a cured, hard skin. Repair them by removing the liquid material and refill with fresh mixture.
Colour changes	Under sunlight, aromatic polyurethanes undergo colour change to yellow/brown. This does not affect their mechanical properties, but it may affect the aesthetic appearance. This can happen even in a short time after the application. Apply a protective, colour-stable aliphatic topcoat when colour stability is important.
Uneven surface even after application	A cavity filling primer is needed, as recommended combination for uneven supports.

CLEANING AND MAINTENANCE

Pavifloor can be coated, after curing, with floor-protection products. These products are usually glossy or semi-glossy wax emulsions. These products are usually reapplied twice a year, following manufacturers information.

Do not use natural wax-based products for Pavifloor protection.

A daily mechanical floor scrubbing is allowed. Use only suitable flooring cleaning products with specific cleaning disc machinery.

Stain removal usually requires solvent use. It is important not to attempt a solvent cleaning before complete curing. Use solvents sensibly: many of them damage the coating.

Shoes and rubber tyres marks

Rubber transfer occurs often after application. A good maintenance method, with a neutral detergent, can remove these stains. If a strong treatment is deemed necessary, non-aggressive solvents can be tested.

Other difficult stains

Find out in each case, which products can clean the stains without damaging the flooring. Should any doubt arise concerning a non-standard cleaning problem, please contact Krypton Chemical.

Repairs

Repairing should be done cautiously, trying to damage as little as possible the appearance of the whole area.

a) Cut and remove the damaged area

b) Prepare the underlying support, for ensuring a good adhesion

c) Local treatment with fresh Pavifloor, following previous instructions.

d) Apply Colodur or Colodur ECO protective coat, overlapping 1 cm around.

SAFETY

Pavifloor contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precaution described there. As a rule, a suitable ventilation must be ensured, and any skin contact avoided. 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.

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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 studying 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.