

MICROLYMER PU

RAYSTON
products



Aliphatic water-based polyurethane resin with antibacterial and antifungi properties

DESCRIPTION

Microlymer PU is a waterborne high performance aliphatic polyurethane resin. It cures giving hard and flexible floor coatings, abrasion resistant. It provides a surface protection for heavily used floorings with antibacterial and antifungi activity.



This material does not discolour upon sunlight exposure, making it suitable for outdoor applications. Being almost solventless, it can be used in public areas with no need to close them. Colourless and pigmented versions are available.

Suggested uses include:

- Parking decks
- Industrial flooring.
- Tennis courts and recreational areas.
- General concrete flooring
- Sealing and surface protection of epoxy, polyurethane or cementitious self-leveling products.

CERTIFICACIONES

EN 13813 SR-B4, 0-AR0, 5-IR14, 7



Applus Laboratory: Taber Abrasion test. No. 08/32309984. Slip class: No. 10/1709-1861- 10101589-1262

Microorganism resistance evaluated according to ISO 846 and antibacterial activity evaluated according to ISO22196

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	Water –based polyol dispersion	Solventless aliphatic polyisocyanate
Physical state	Liquid	Liquid
Packaging (pre-dosed kit A+B)	Plastic container	Metal container
	Colourless: 11.4 kg 3 kg	Colourless: 3.6 kg 1 kg
	Pigmented 12.5 kg 3.3 kg	Pigmented 2.5 kg 0.7 kg
Non-volatile content (%)	Colourless: 33%	100%
	Pigmented: 60%	
Flash point	>200°C	>100°C

Colour	Colourless: milky white. Pigmented: variable. Information on available colours under request.	Colourless
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Density

Temp (°C)	Density (g/cm3)	Temp (°C)	Density (g/cm3)
25	1,03 (clear)	25	1,15 (clear)
	1,31 (pigm.)		

Viscosity

approximate Brookfield

Colourless			
Temp (°C)	Viscosity (.s)	Temp (°C)	Viscosity y (.s)
35	90	35	300
25	125	25	450
15	350	15	1200
5	900	5	2200

Pigmented

Temp (°C)	Viscosity (.s)
35	800
25	1200
15	2500
5	5000

VOC content

<10 g/L, <1%
A,i

Mixing ratio A/B

Colourless:

A=100, B=32 by weight
A=100, B=29 by volume

Pigmented:

A=100, B=20 by weight
A=100, B=23 by volume

Mixture properties

Temp(°C)	Density (g/cm3)	Viscosity (.s)
25	1,10 (clear)	400 (clear)
	1,19 (pigm.)	2900 (pigm.)

Colour

Milky white or pigmented

Overall non- volatile content

Colourless: 49%
Pigmented: 67%

Pot life approximate

Conditions (100g)	Pot life(min)
20°C, 40% rh	180
9°C, 60% rh	300

Storage

Keep between 10°C and 30°C. Protect from frost.

Use before

12 months after manufacturing date.

INFORMATION ON THE FINAL PRODUCT

Final state	Solid polyurethane film
Colour	Several colours available. Please contact Krypton Chemical for further information.
Hardness (shore)	55D clear 63D pigmented
Mechanical properties	Elongation at break: 35% (clear), 23% (pigmented)
Abrasion resistance	15 mg (500 cycles) 28 mg (1000 cycles)
Chemical resistance	Taber, CS-10, 1000 g Surface contact, 24 hours, 25°C (5=ok, 0=not recommended)

Chemical	Result
Water	5
Isopropyl alcohol	0
Xylene	0
Hydrochloric acid (household-type)	5
Bleach	5
Ammonia	1
Sodium hydroxide 50%	5
Diesel	3
Engine oil	5
Concentrated acetic acid	0
Hydrogen peroxide 10%	0
Methoxypropyl acetate	0
Acetone	0
Acetic acid 10%	0
Skydrol	5

UV resistance	Colour stable under sunlight
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Slip resistance	Class 3 as per UNE EN 12633-2003
Gloss	Clear: 75-80% (at 60°) Pigmented: 60-65% (at 60°)

Antibacterial activity	Staphylococcus aureus ATCC 6538P > 99,99 % Escherichia coli ATCC 8739>99.99%
ISO22196:2011	

SUPPORT REQUIREMENTS

Support must fulfill the following requirements:



KRYPTON CHEMICAL SL

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Cohesive strength: minimum 1,5 .
Compression strength: minimum 25 .

Free from any vapour or water pressure. Support must also be clean, dry and free from poorly-adhesive areas. Moisture content must be less than 4%.

Recommended support temperature: 10°C to 25°C.
If underlying moisture is suspected, use a suitable primer. Please contact Krypton Chemical for further information about primer types.

New concrete slabs must be allowed to dry for three weeks before starting job.

On porous substrates, it is recommended a prior sealing/primer coating. Direct application of Microlymer PU Matte on a porous substrate is not recommended because of the risk of excessive matting agent deposits on the surface.

ENVIRONMENTAL CONDITIONS

- Recommended air temperature: 10°C to 30°C
- Recommended humidity: less than 80%.

SUPPORT PREPARATION

Concrete:

Abrade, scarify or treat the surface with a diamond grinding machine or similar, then applying enough quantity of a Rayston epoxy-type primer. Allow a 12-24 hours drying time of the primer before resuming job.

MIXING

Open the component A container. Pour component B in it and stir gently for 2 minutes. Transfer the mixture to a bigger container and check there is no unmixed product left.

APPLICATION

Use a suitable paint roller.

RECOMMENDED QUANTITIES

Apply up to 250 or 300 g/m2 by coat. Thicker applications can lead to blistering

CURING TIME

Curing time depends strongly on the local conditions. Curing speed will increase with temperature and decrease with humidity. Following data refer to 200 g/m2 applications.

Conditions	Touch dry (h)
20°C, 50% rh	5
20°C, 15% rh	4
5°C, 50% rh	25
5°C, 20% rh	35
5°C, 80% rh	60
35°C, 40% rh	2
35°C, 10% rh	1

RECOATING

When two coats are applied, the second one can be applied after 24 or 48 the first one is dry to touch.

RETURN TO SERVICE

Light pedestrian traffic is allowed after 24 hours.

TOOL CLEANING

Component A and B can be cleaned with water. Cured product cannot be dissolved, unless special stripping products are used.

FAQ

Question	Answer
¿It can be thinned?	Use water, up to 15% of addition, in the A+B mixture, immediately after mixing

MAINTENANCE

A daily water scrubbing is allowed. Caution: some solvents may seriously damage the surface.



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SAFETY

Component B contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, 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. Sprayed application methods are not recommended due to health/safety reasons. 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.

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" 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.