



Aliphatic water-based polyurethane resin

DESCRIPTION

Colodur Eco 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. 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.

APPLICATION

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

CERTIFICATIONS

EN 13813 SR-B4,0-AR0,5-IR14,7. Applus Laboratory: Taber
Abrasion test. N.08/32309984.
Slip class: No. 10/1709-1861- 10101589-1262



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	Plastic container	Plastic container
	Colourless:	Colourless:
	11.7 kg	3.3 kg
	3.1 kg	0.9 kg
	Pigmented:	Pigmented:
	12.5 kg	2.5 kg
	3.3 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
Density	Colourless (25°C): 1.3 g/cm ³ Pigmented (25°C): 1.31 g/cm ³	Temperature (°C) 25 Density (g/cm ³) 1.15
Viscosity	Colourless (25°C): 850 mPa.s Pigmented (25°C): 1200 mPa.s	Temperature (°C) 25 Viscosity (mPa.s) 1000
VOC (VOC class as per 2004/42 EC)	<10 g/L 1% A, i	
A/B mixing ratio	Colourless: A=100, B=28 by weight A=100, B=26 by volume Pigmented: A=100, B=20 by weight A=100, B=23 by volume	

Mixture properties	Temperature (°C)	Density (g/cm³)	Viscosity (mPa.s)
	25	1.05 (clear) 1.19 (pigmented)	300 (clear) 2900 (pigmented)
Colour	Milky white or pigmented		
Overall non-volatile content	Colourless: 45% Pigmented: 67%		
Pot life	Conditions	Pot life (min)	
	20°C, 40% hr	180	
	9°C, 60% hr	300	
Storage	Keep between 10° and 30°C, protected from frost.		
Use before	12 months after manufacture date.		

INFORMATION ON THE FINAL PRODUCT

Final state	Solid polyurethane film
Colour	Colourless or pigmented
Hardness (Shore)	55D (colourless) 63D (pigmented) (ISO 868)
Mechanical properties	Elongation at break: 35% (colourless) 23% (pigmented) (EN ISO 527-1/3)
Abrasion resistance	15 mg (500 cycles) 28 mg (1000 cycles) Taber, CS-10, 1000 g
UV resistance	It does not yellow. Certain pigments undergo slight changes under sunlight. For critical applications please consult.
Slip resistance	Quartz sand spreaded onto (0,4-0,9 mm) at 1 kg/m ³ : Class 3 (UNE EN 12633-2003) Class 1 without quartz sand
Gloss	Colourless: 75-80% (60°) Pigmented: 60-65% (60°)
Thermal resistance	Stable between -40°C to 80°C
Chemical resistance	Surface contact, 24 hours, 25°C (5=ok, 0=not recommended)

Chemical	Results
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



Aliphatic water-based polyurethane resin

SUPPORT REQUIREMENTS

Support must fulfill the following requirements:

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

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 30°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 Colodur ECO 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%.

Recently cured or applied membrane cannot meet moisture or liquid water because it can form white spots.

SUPPORT PREPARATION

Concrete:

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

MIXING

Mix before use component A. 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.

Application of Colodur ECO pigmented + 10% anti-slip additive at 700 microns with airless: the application must be carried out within the useful life of the product.

The projection machine must be configured:

- Nozzle: 500-600
- Pressure: 150-180 bar
- Flow: 5kg/m
- Remove filter for application.

Note: from a specific percentage of dilution on the total product, pigment separation problems begin to appear. Do not exceed 10%.

RECOMMENDED QUANTITIES

Apply up to 250 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% hr	5
20°C, 15% hr	4
5°C, 50% hr	25
5°C, 20% hr	35
5°C, 80% hr	60
35°C, 40% hr	2
35°C, 10% hr	1

RETURN TO SERVICE

Light pedestrian traffic is allowed after 24 hours.

RECOATING

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

TOOL CLEANING

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

FAQS

Question	Answer
¿It can be thinned?	Use water, up to 15% of addition, in the A+B mixture, immediately after mixing. If thinning several cans, be sure to use the same amount in each to prevent colour variations.

MAINTENANCE

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

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 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 to conduct tests "on-site" in order to determine their convenience for a specific project.



Aliphatic water-based polyurethane resin

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 Technical Data Sheet supersedes previous versions.