

Colodur

ALIPHATIC ONE-COMPONENT POLYURETHANE RESIN



DESCRIPTION

Colodur is a performance polyurethane resin, aliphatic isocyanate-based, that cures upon reaction with atmospheric moisture, giving hard and flexible coatings.

Colodur is an excellent surface protection for floor under heavy abrasive conditions and for use over aromatic polyurethane waterproofing membranes as UV protection.

This product does not yellow on exposure to sunlight.

ADVANTAGES

- Clear, glossy, topcoat.
- One-component product. Easy to apply.
- Colour and UV stability.
- Abrasion and weathering resistance
- Fast curing
- Good hiding power.



APPLICATIONS

- Parking decks
- Industrial flooring. Freezer rooms.
- Recreational areas
- General purpose concrete floorings
- Sealing and protection of epoxy floor coatings
- Protective topcoat for aromatic-based polyurethane waterproofing membranes

CERTIFICATIONS

- **Applus independent laboratory:** Mechanical properties, artificial weathering, watertightness and water permeability. Certificate. Nº 08/32307407, Abrasion: 08/32309984, 10/101.589-1432, Slip: 10/1709-1862
- **CE Marking**

EN 13813 SR-B2,0-AR0,5-IR14,7



TECHNICAL DATA SHEET

Technical Data

INFORMATION ON THE PRODUCT BEFORE APPLICATION

Chemical description Solvent borne single-component aliphatic polyurethane

Packaging Metal container: 4 kg, 20 kg

Physical state Liquid

Non-volatile content >50%

Flash point 36° C (ASTM D 93)

Available colours Colourless or slightly yellow. It can be pigmented.

Density Colourless 0.95 g/cm³ (20°C)
Pigmented 1,07 g/cm³ (20°C)

Viscosity (Brookfield)
Approximate

<i>Temperature (°C)</i>	<i>Viscosity (mPa.s)</i>
5	890
10	660
20	410
30	230

VOC (g/L i %)
VOC class

VOC content: 468,76 g/l

Product subclass: i II Solvent based single-component performance products

Limit from 01/01/2010: 500 g/l

Pot life 6 hours (1 kg, 20°C, 50% hr)

Storage Keep at a temperature below 30°C, away from ignition sources and moisture
Product may be used up to 6 months after manufacture in its sealed original container.

INFORMATION ON THE FINAL PRODUCT

Final appearance Solid elastomeric membrane

Colour Colourless or according to the specific pigmentation. For available colours and use details, see Technical Data sheet of Pigment PU

Hardness (Shore) 53D

Mechanical properties Maximum elongation: 173%
Tensile strength: 27.4 MPa

Chemical resistance

Permanent contact
(0=worst, 5=best)

Chemical	Conditions	Result
Agua	15d, 80°C	5
Salt water (saturated)	5d, 80°C	5
Hydrochloric acid (200 g/l)	7d, 80°C	0
Hydrochloric acid (20 g/l)	7d, 80°C	3 (discolouration)
Sodium hydroxide (40 g/l)	28d, 80°C	4
Sodium hydroxide (4 g/l)	28 d, 80°C	5
Ammonia	28 d, 80°C	5
Bleach, pure	28 d, 80°C	3
Bleach (10% solution)	28 d, 80°C	4
Xylene	7 d, 80°C	0
Isopropyl alcohol	7d, 80°C	0
Engine oil	28 d, 80°C	5
Diesel	16d, 80°C	3 (discolouration)

Surface contact (0=worst, 5=best)

Chemical	Conditions	Result
Hydrochloric acid (20%)	1h	4
	7 days	2
Skydrol	7 days	4

Water vapour permeability

2,7 g/m2 day, (UNE EN ISO 7783)

Abrasion resistance

11 mg (Taber, CS-10, 1 kg)

UV resistance

UV resistant. Aliphatic polyurethanes are colour-stable, non yellowing.

Thermal resistance/use temperature

Stable up to 80°C

SRI index (ASTM E1980-01)

104.5-105.4

APPLICATION GUIDELINES

Recommended combinations

Clear waterproofing membranes

1. Primer PU 100 g/m2
2. Colodur 300 g/m2 + Rayston Fiber (30 g/m2 net) soaked onto the Colodur base while still wet
- 3 Colodur, up to 4 coats (300 g/m2 each) depending on the intended thickness.

Self-leveling floorings:

Epoxy-type primer 200-300 g/m2
Pavifloor/Paviflex, 1,5 kg/m2, with quartz sand (optional)
Colodur , pigmented. One coat:300 g/m2

Waterproofing membrane protection.

Epoxy-type primer 200-300 g/m2
Liquid waterproofing membrane (Impermax, Impermax 2k, Impermax Polyurea H, Polyurea) 1-1,5 kg/m2
Colodur , pigmented, one coat 300 g/m2

Support requirements	<p>In order to achieve a good penetration and bonding, support must be:</p> <ol style="list-style-type: none"> 1.Flat and leveled (Impermax is self-leveling) 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. 								
Recommended environmental conditions	<p>Support temperature should be between 10°C and 30°C. At higher temperatures, specific precautionary measures must be taken. Please follow manufacturer advice. Support moisture should be less than 4%. Relative humidity of air should be less than 85%</p> <p>High moisture conditions can lead to bubble formation under the membrane surface.</p>								
Preparation	<p>It is necessary to prepare all critical spots. Consult application documents provided by Krypton Chemical.</p> <p>For all application on waterproofing membranes (Impermax, Impermax 2k, Impermax Polyurea H, Polyurea) re-apply Colodur 60 following the relevant reapplication guidelines.</p>								
Mixing	<p>If necessary, dilute with up to 10% Solvent Rayston for viscosity adjustment. Note: on non-porous substrates, do not dilute the first coat. Stir gently before use. Use low-speed stirring equipment to minimize air bubbles.</p>								
Application	<p>Apply by roller, brush or airless spraying equipment. Although not strictly necessary, it is highly recommended use all the contents. If not, ensure total sealing of the remainder.</p> <p>Note: some roller materials are damaged by the solvent. If in doubt, is recommended to test before use.</p> <p>For airless spraying equipment, viscosity is likely to need adjustment. Excess pressure, along with high temperature and humidity, may give rise to microbubbles that makes the surface to look hazy.</p> <p>For pigmented applications, mix the pigment paste with colodur 60 by means of a low speed stirrer and wait some minutes to allow bubbles to diasappear. Apply the pigmented colour normally. It is recommended to use all the pigmented mixture.</p> <p>Apply, as a general rule, to 200-500 g/m2</p>								
Curing time	<p>Curing time is dependent on the environmental conditions. Curing rate increases with temperature and humidity rises. The following table gives a rough estimation of the curing time under diverse conditions for a 500 microns coat.</p> <table> <tr> <th colspan="2">Conditions</th></tr> <tr> <th colspan="2">Touch dry (h)</th></tr> <tr> <td>43°C, 50% hr</td><td>2</td></tr> <tr> <td>25°C, 50% hr</td><td>14</td></tr> </table>	Conditions		Touch dry (h)		43°C, 50% hr	2	25°C, 50% hr	14
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Reapplication	<p>A second coat of Colodur 60 can be applied when the first one is no longer sticky. Do not wait more than 24 hours for the next coat application to ensure good intercoat adhesion.</p>								

Return to service At usual conditions (25°C, 50% rh) the membrane can be walked on (light traffic) in 24-48 hours. Depending on final use, it is recommended to wait 7-10 days for usual traffic. Final hardness development may take up to 15 days.

Tool cleaning Liquid Colodur can be cleaned with Rayston Solvent, acetone and alcohols. Once hardened, it cannot be dissolved.

Cleaning and maintenance It may be necessary to reapply Impertrans layers if they are worn out due to traffic, weather, corrosion, etc.

For stain removal, a surface treatment with Rayston solvent or isopropyl alcohol may be attempted. Strong acids are totally inadequate. Some solvents may damage the membrane. If this happens, the affected area has to be cut and repaired with a new Impermax application.

A final treatment and periodic maintenance with protective wax is suggested. Contact Krypton Chemical or Flooring Application manual for details.

FAQ

<i>Problem</i>	<i>Question</i>	<i>Causes</i>	<i>Solution</i>
Does not cure	Suitable solvent?	Some thinning solvents are not suitable	Apply a second coat using only Rayston Solvent as a diluant
Bubbles	Porous support?	No primer?	Seal with an epoxy-typ primer before Colodur 60
	Airless	High pressure	Lower pressure or apply thinner coats. Ambiental conditions may be adverse for this application method.
Not enough opacity	Horizontal?	Not enough pigment	Mix well
	Curing rate can be slower?		Use of slow solvent Rayston can be useful

Safety Colodur contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precaution described there. As a general rule, a suitable ventilation must be ensured and all ignition sources must be 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, do no mix it with other substances without checking for possible 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 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.

Krypton Chemical SL

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