

Hand-applied polyaspartic coating

DESCRIPTION

Kryptanate 100 LV is a 100% solids, low viscosity two-component, polyaspartic system that, opposite to usual polyurea systems, has a gel time and a curing speed slow enough to allow manual application, while retaining a curing time still shorter than usual two-component polyurethane systems. Kryptanate 100 LV is delivered colourless or pigmented. Main applications includes flooring and multilayer combinations.

ADVANTAGES

- Fast cure even at low temperatures.
- Good adhesions strength
- Hard and resistant, in one-coat application.
- Excellent gloss retention. Aliphatic polyisocyanate base. Does not yellow upon exposure to sunlight.
- Good weathering resistance.
- Thick layers possible in a single application.
- Improves corrosion resistance. Several studies show that these coatings exhibit a corrosion-inhibition potential in metal surfaces. Suitable for operating freezing rooms.
- Ideal for new construction and refurbishment. Easier and time-saving solution in contrast with classical epoxy and polyurethane systems

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	polyamine	Solventless aliphatic polyisocyanate
Physical state	Liquid	Liquid
Packaging	Metal container Clear: 8.90 kg 3.20 kg Pigmented: 9.4 kg 3.35 kg	Metal container Clear: 5.10 kg 1.80 kg Pigmented: 4.60 kg 1.65 kg
Non-volatile content (%)	100	100
Flash point	100°C	>100°C
Colour	Clear yellow or pigmented	Colourless
Density (g/cm³, 25°C)	1.06 (colourless) 1.08 (pigmented)	1.15

Viscosity

approximate Brookfield

	Temp (°C)	Viscosity (mPa.s)	Temp (°C)	Viscosity (mPa.s)
Clear	10	725	25	450
	15	350	35	260
	20	265		
	25	200		
	30	145		
Pigm.	15	420		
	20	320		
	25	240		
	30	165		

A/B mixing ratio

Colourless:
A=100, B=56 by weight
A=100, B=52 by volume

Pigmented:
A=100, B=49 by weight
A=100, B=46 by volume

Initial mixture properties

Density: 1.08 g/cm³ (Clear) 1.12 (pigmented)
Viscosity 340 mPa.s (clear), 360 (pigmented)
Colour: light yellow if clear. Pigmented otherwise..

Working time 20-25 min (25°C, 50% RH)
High temperature and humidity reduce pot life

Storage Keep at 10°C-30°C, away from moisture.

Use before 12 months after manufacture date.

INFORMATION ON THE FINAL PRODUCT

Final state Polyurethane/polyaspartic solid film

Colour Colourless or pigmented

Hardness (shore) 67D

Mechanical properties Maximum elongation: 10%

Tensile strength: 35 MPa

Chemical resistance Surface contact, 24 hours, 25°C
(5=ok, 0=not recommended)

Chemical	Result
Water	5
Xylene	2
Ethyl acetate	1
Acetic acid (concentrated)	0
Bleach	4
Hydrochloric acid (commercial)	4
Ammonia	5
Hydrogen peroxide	5
Methyl alcohol	0
Acetone	0
Sodium hydroxide (40%)	5
Diesel	5
Sulphuric acid (40%)	5
Sulphuric acid (96%)	0
Skydrol	5

UV resistance Colour stable under sunlight

Abrasion resistance 20 mg (Taber, 500 c. CS-17, 1000 g)

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 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.

MOISTURE AND HUMIDITY

Recommended air temperature: 10°C to 30°C
Recommended humidity: 40% to 80%.

SUPPORT PREPARATION

Concrete:

Abrade, scarify or treat the surface with a diamond grinding machine or similar, then applying enough quantity of Rayston Epoxy Primer to seal the substrate and ensure enough penetration into substrate. On certain substrates, it is preferred to apply one layer of Primer 100 with 10 – 20% solvent to obtain a better penetration, while applying afterwards a second hand without solvents in order to seal substrate properly. Allow a 12-24 hours drying time of the primer before resuming job.

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MIXING

Open component A container. Stir using a low-speed stirrer preventing an excessive air bubbling, until dispersion of fillers. 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 or slumps of undispersed filler material. Note that humidity can reduce pot life

APPLICATION

Apply by roller or spreader, when needed. Airless equipment is not recommended due to safety reasons. Reaction rate increases with the size of the mixtures; therefore it is advised not to mix more amount of product than that can be easily applied in a 15 minutes period. Otherwise, application could be difficult or the final appearance could be affected.

RECOMMENDED QUANTITIES

Kryptanate 100 may be applied in 200 g/m² thick coats in 2 to 3 coats, depending on the chosen pigmentation.

CURING TIME

Curing time depends strongly on the local conditions. Curing speed will increase with temperature and humidity. The following table gives approximate values for 200 g/m² applications. Thicker coats will give longer curing times. Thinner coats will cure faster.

Conditions	Touch-Dry (h)
25°C, 25% rh	1
10°C, 60% rh	2

RE-APPLICATION

Usually desired thickness is achieved in a single coat

RETURN TO SERVICE

One hour after touch-dry, light traffic is usually allowed.

TOOL CLEANING

Component A and B can be cleaned with solvent Rayston. Cured product cannot be dissolved, unless special stripping products are used. Due to its fast curing rate, A+B mixture staining must be cleaned as soon as possible.

CLEANING AND MAINTENANCE

A daily water scrubbing is allowed. Solvents may seriously damage the surface.

FAQ

Problem	Answer
Dilution?	Not usually needed. If desired, some solvent can be added, but keep in mind that this will result in a longer drying time, and colour could be affected. Solvents must be always polyurethane grade. They must be absolutely free from alcohols or water, or any substance that can affect the crosslinking reaction. Recommended solvents are xylene or methoxypropyl acetate (PMA).
Is spreading of quartz sand allowed?	Yes. The pot life gives enough time for the application of antislip additives (Quartz sand, bauxite, etc) between two coats. Please refer to Krypton Chemical advice for further information on the application details.

SAFETY

Kryptanate 100 LV 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.