KRYPTANATE M FLEX

Hand-applied flexible polyaspartic topcoat

DESCRIPTION

Kryptanate M Flex is a flexible 2-component, slow reactivity polyaspartic, that, unlike usual polyurea systems, it can be mixed and manually applied due to its moderated reaction speed while retaining a fast-curing profile once applied. It is delivered in colourless or pigmented versions.

ADVANTAGES

- Fast curing, event at low ambiental temperatures.
- Good adhesion properties.
- High hardness and resistance, achieved with a single application.
- Excellent gloss and colour retention.
- Aliphatic polyisocyanate basis. No discolouration.
- Good weathering resistance.

Improves corrosion resistance.
Several test prove that these coatings inhibit corrosion in metal surfaces. Suitable for operating freezing rooms.
Ideal for new construction and/or refurbishment where curing speed is essential.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	Polyamines solution	Solvent les aliphaticpolyisocyanate
Physicalstate	Liquid	Liquid
Packaging	Metal container **Colourless** 2.95 kg 11 kg **Pigmented** 3.85 kg 11.6 kg	Metal container **Colourless:** 1.05 kg 4kg **Pigmented** 1.15 kg 3.4 kg
Non-volatile content (%)	Colourless: 73 Pigmented: 68	100
Flash point	35ºC	>100ºC
Colour	See product list for available colours	Colourless

Density

Temperature (ºC)	Density (g/cm³)
25	1.0 (clear) 1.05 (pigm.)

Temperature (ºC)	Density (g/cm³)
25	1.15

Viscosity

approximate Brookfield

Colourless

Temperature (ºC)	Viscosity (mPa.s)
10	45
25	25
35	15

Temperature (ºC)	Viscosity (mPa.s)
10	725
25	450
35	260

Pigmented

Temperature (ºC)	Viscosity (mPa.s)
10	50
25	35
35	20

A/B mixing ratio	Colourless A=100, B=36 by weight A=100, B=31.5 by volume Pigmented A=100, B=29 by weight A=100, B=27.5 by volume
Mixture properties (25ºC)	Density: 1.04 g/cm³ Viscosity: 105 mPa.s (clear), 115 mPa.s (pigmented) Non-volatile content: 80% (clear), 75% (pigmented)
Colour	Colourless if not pigmented. Available colours in the product list.

	Conditions	Pot life(min)
Pot life	22ºC 40%hr	30
Storage	Keep at 10ºC and 30ºC.	
Use before	12 months after manufacture date.	

INFORMATION ON THE FINAL PRODUCT

Final state	Solid polyaspartic/polyurethane coating
Colour	Colourless. Other colours available under request
Hardness (Shore)	55D
Density	1.07 g/cm³ (colourless) 1,15 g/cm³ (pigmented)
Mechanical properties	Elongation at break: 150% Tensile strength: 22 MPa (EN-ISO 527-3)
UV resistance	Colour stable under sunlight
Adhesion	Fibrous cement: >4 MPa
Chemical resistance	Surface contact, 24 h room temperature (5=best, 0=worst)

Chemical	Result
Water	5
Isopropyl alcohol	3
Xylene	1
Ammonia 3%	5
Sodium Hydroxide 50%	5
Acetic acid 10%	5
Acetic acid 20%	4
Sulphuric acid 50%	3
Hydrochloric acid 10%	5
Hydrochloric acid 20%	3
Bleach	5
Sodium hypochlorite 15%	5
Hydrogen peroxide 10%	5
Hydrogen peroxide 33%	0
Petrol	2
Diesel	4

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: 10ºC to 25ºC.

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.

ENVIRONMENTAL CONDITIONS

Recommended air temperature: 10ºC to 30ºC
Recommended humidity: minimum 40% maximum 80%

SUPPORT PREPARATION

Concrete:
Abrade, scarify or treat the surface with a diamond grinding machine or similar, then applying enough quantity of a primer to seal the substrate (e.g the same Kryptanate M Flex diluted in Rayston Solvent) and ensure enough penetration into substrate. On certain substrates, it is preferred to apply one layer of Primer

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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 12-24 hours drying time of the primer before resuming job.

Steel:
Steel substrates must be clean, sand blasted, and degreased. It is advised to prime the substrate with PU Primer, allowing the solvent to evaporate and waiting for at least 1 hour before application of Kryptanate M Flex.

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.

APPLICATION

Apply by roller. 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 M Flex can be applied in a wide thickness range. It is recommended to apply 250 microns when dry. (200 to 600 g/m^2 wet film).

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/m^2 applications. Thicker coats will give longer curing times.

Conditions	Touch to Dry (h)	Total (h)
22ªC, 40% rh	1.5	3
8ºC, 50% rh	2.5	5

RECOATING

Only one coat is usually needed.

RETURN TO SERVICE

Under most conditions a light traffic is permitted about 2 hours after it is dry to touch. A normal use is recommended only the following day.

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 staing must be cleaned as soon as possible.

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

FAQ

Problem	Answer
It can be thinned?	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.
Can it be pigmented?	Please refer to Krypton Chemical advice for colour options and procedures

MAINTENANCE

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

SAFETY

Kryptanate M Flex contains isocyanates and flammable solvents. 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.

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