KRYPTON ProLine 60 EPS

Sprayed, hot-applied modified polyurea membrane

DESCRIPTION

Krypton ProLine 60 EPS is a hard protective coating specially formulated for expanded polystyrene (EPS) foam. This product can only be applied by 2-component spraying equipment.

APPLICATION

- Covering EPS foam and phenolic foam, as an impact protection
- Industrial machinery and vehicle protection
- Theming

PROPERTIES

- Hard-flexible membrane
- Fast curing

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	Polyol/Polyamine	Aromatic isocyanate prepolymer
Physical state	Liquid	Liquid
Packaging	Metal container 183 kg 23 kg	Metal container 213 kg 26.5 kg
Non-volatile content	approx 100%	100%
Flash point	>100ºC	>100ºc
Colour	Slightly yellow	Brown
Density	Temperature (ºC) / Density (g/cm³): 25 / 1.04	Temperature (ºC) / Density (g/cm³): 25 / 1,20
Viscosity	Temperature (ºC) / Viscosity (mPa.s): 25 / 1800	Temperature (ºC) / Viscosity (mPa.s): 25 / 1500
Mixing ratio A/B	A=1, B=1,15 by weight A=1, B=1 by volume	
Density and viscosity of the mixture	Fast polymerization. See Pot life data	
Colour	Clear yellow, but component A is pigmented by addition of pigment paste (Spray Pigment) delivered with each kit of Krypton ProLine 60 EPS	
Pot life Approximate	Gel time mixture A+B (20 g): 7 seconds at 25ºC 4-5 seconds at 60ºC Tack-free: 15-20 seconds Time to sand: 10-15 minutes	
Storage	Keep between 10º y 30ºC.	
Use before	12 months after manufacture date, provided it is kept in its sealed container.	

INFORMATION ON THE FINAL PRODUCT

Final state	Solid elastomeric membrane
Colour	Available colours: light grey, dark grey, rust red, blue (may darken during storage and exposure to sunlight). Other colours under request.
Hardness (Shore)	65-70D (ISO 868)
Mechanical properties	Tensile strength: 25 MPa Elongation at break: 15% Tear strength: 83.3 N/mm
UV resistance	Good resistance to UV-induced degradation. Aromatic polyureas undergo change of colour under sunlight. This change does not affect its mechanical properties. Additional UV protection can be achieved by application of an Impertrans or Krypton ProLine Pu 10000TC.

SUSTRATE REQUIREMENTS

Good substrate preparation is essential for good adhesion, most surface coating failures can be attributed to surface preparation. All surfaces must be free of dust, dirt, oil, grease, rust, corrosion and other contaminants.

Wood

All wood must be clean, dry and free of knots, chips, oil, grease or other contaminants. The chipped or rough areas should be sanded.

Glass fibre reinforced plastic:

The surface should be lightly blasted or sanded
Sandpaper 80 grit and cleaned.

Plastic foam:

Improved adhesion is obtained when the foam is mechanically worn. When polystyrene is coated, do not use a primer.

MIXING

Stir and homogenize separately both components using suitable mixing equipment before being loaded into the machine. Add the required Pigment Spray to the A-component and stir before loading. Recirculate both components while heating up to the required application temperatures.

APPLICATION GUIDELINES

Krypton ProLine 60 EPS must be applied using 2-component hot spraying equipment.

Recommended temperatures are:

- Component A: 70ºC
- Component B: 70ºC

Pressure should be 130-150bar.

During application, check layer thickness and curing speed.

Spray Krypton ProLine 60 EPS at 2 kg/m^2. It is recommended to wait for a short period of time between applications to prevent exotherm and possible adherence issues.

Wind speeds more than 25 km/h may result in excessive loss of exotherm and interfere with the mixing efficiency of the spray gun affecting polyurea surface texture, cure, and physical properties and will cause overspray issues.

Contact Krypton Chemical for more detailed technical information.

CURING TIME

Approximate hardness values are provided as reference only (1 mm, polypropylene support, 25ºC 50% RH)

Time	Hardness (Shore D)
15 min	36
2 hours	50
7 hours	57
14 hours	60
24 hours	61

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REAPPLICATION

Needed thickness should be obtained in one single coat. A second coat is not recommended.

TOOL CLEANING

Solvent use for machine component cleaning is discouraged. A cleaning plasticizer fluid like Rayston Fluid is suitable. Component B must be completely removed from all air-exposed parts and replaced with this cleaning fluid.

FAQs

PROBLEM	QUESTION	CAUSE	SOLUTION
The product does not cure	Is AB ratio correct?	Pressure differences	Check and correct machine operation
Bubbles or open pores	Porous support?	No primer unsuitable support	Apply a suitable primer before Krypton ProLine 60 EPS
No hiding power	¿Horizontal?	Too little product Too little pigment	Apply 2 kg/m^2 Ensure full A + pigment homogenisation
Color change	Exposed to sunlight?	UV-reaction	Use a last coat in dark grey or red
	Can it be applied without pigmentation?		Use of pigment helps to obtain a uniform appearance.

SAFETY

Component B contains isocyanates. Always follow the safety instructions in the Material Safety Data Sheet. As a rule, a good ventilation and/or respiratory protection is needed (combined organic vapour filters + particles) along with protective clothing. This product must be used only for the applications here described. This product is intended for industrial and professional use. It is not suitable for DIY-type applications.

ENVIRONMENTAL PRECAUTIONS

Empty containers must be handled with the same precautions as if they were full. Treat empty containers as hazardous waste and transfer them to an authorized waste manager. If the containers still have some material left, do not mix with other product with no knowledge of potentially dangerous reactions. Component A and B may be mixed on a 1/1 ratio to get an inert material, but never do it in volumes larger than 5 litres to prevent a dangerous heat evolution.

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 studying deeply all information provided before proceeding to the use or application of any of our products, and strongly advise to conduct tests “on-site” 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 Technical Data Sheet supersedes previous versions.

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