

KRYPTON - ProLine CH80



Highly cross linked, high hardness, structural polyurea

DESCRIPTION

ProLine CH80 is a highly cross linked polyurea formulated to provide excellent chemical and moisture resistance for liquid tanking applications especially involving chemical or waste chemicals. ProLine CH80 provides superior pipe protection in a one product, one application format.

The rigid nature of ProLine CH80 makes it an efficient mould making material and it is structural enough in nature to provide opportunities to replace laborious fibreglass applications.

APPLICATIONS

- Lining of tanks containing liquid and waste chemicals.
- Pipe coatings.
- Protection of EPS structures – Theming, furniture.
- Replacement of fibreglass for mold fabrication.
- Replacement of fibreglass for structural backing applications.
- In mold applications of components.

FEATURES

- Seamlessly spray applied to any thickness in one application.
- Extremely fast cure resulting in reduced handling and re-use times.
- High impact resistance.
- High puncture and compression resistance.
- Very good chemical resistance.
- Very low permeability.
- Rigidity provides excellent structural support.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION				
	Component A	Component B		
Chemical description	Polyamine	Aromatic isocyanate prepolymer		
Physical state	Liquid	Liquid		
Packaging	Metal container 196 kg 18.6 kg	Metal container 220 kg 21 kg	Component C (pigment paste) Metal can (4 kg or 0.4 kg)	
Non-volatile content (%)	100%	100%		
Flash point	>100°C	>100°C		
Colour	Yellow (without pigment)	Yellow		
Density	Temperature (°C) 25	Density (g/cm ³) 1,01	Temperature (°C) 25	Density (g/cm ³) 1,23
Viscosity	Temperature (°C) 25	Viscosity (mPa.s) 750	Temperature (°C) 25	Viscosity (mPa.s) 200
A/B mixing ratio	A=1, B=1.11 by weight A=1, B=1 by volume			
Density and viscosity of the A/B mixture	Fast polymerization (see Gel time A+B)			
Colour	Dark yellow, but component A is pigmented by addition of pigment paste (Pigment Spray) delivered with each kit			
Curing performance	Gel time mixture A+B (20 g) 7 s at 25°C Tack free time: 20 s at 30°C			

Storage	Keep between 10°C and 30°C
Shelf life	Approximately 12 months after manufacturing date.

INFORMATION ON THE FINAL PRODUCT

Final state	Elastomeric solid membrane
Hardness (Shore)	85D ± 5
Mechanical properties	Maximum elongation: 6% Tensile strength: 60 MPa (UNE EN ISO 527-1/3) Other mechanical properties Elastic modulus: 939 MPa Flexion: 110 kg
Abrasion resistance	147 mg (Taber, 1000 c. CS-10, 1kg)
Liquid water permeability EN 1062-3:2008	0,002 kg/m ² h ^{0.5}
Thermal resistance	Stable up to 180°C (6-hour test).

CHEMICAL RESISTANCE

Immersion test, 80°C, 7 days (0=poor resistance, 5=good resistance)

Krypton recommends that in all applications involving chemicals a pre-test of the lining's suitability in the customer's application be conducted. Consult with Krypton Technical Team.

Chemical	Conditions	Result
Water	15d, 80°C	5
Salt water (saturation)	15d, 80°C	5
Xylene	7d, 80°C	3
Ethyl acetate	7d, 80°C	2
Isopropyl alcohol	7d, 80°C	0
Sodium hydroxide 50%	7d, 80°C	5
Hydrogen peroxide 33%	7d, 25°C	4
Sulfuric acid 10%	7d, 80°C	5
Sulfuric acid 30%	30d, 80°C	4
Bleach	7d, 80°C	5
Ammonia	7d, 80°C	5
Diesel	16d, 80°C	5
Hydrochloric acid 12M 37%	7d, 80°C	0
Hydrochloric acid 6M 18%	7d, 80°C	3
Hydrochloric acid 3M 9%	7d, 80°C	4
Hydrochloric acid 0.75M 2%	7d, 80°C	5
Sodium hypochlorite 15%	7d, 80°C	4
Engine oil	7d, 80°C	5
Crude petroleum	21d, 20°C	5
Sulfamic acid 85%	7d, 60°C	4
Oleic acid	7d, 80°C	0
Glycerine	7d, 80°C	5
Kerosene	7d, 80°C	3

SUBSTRATE REQUIREMENTS

The substrate must be free of contaminants (fats, oils and residue chemicals), dust and loose materials. Irregularities protruding from the surface should be eliminated.

In the case of concrete it must be totally cured and free of any laitance. Ideally a concrete substrate must be completely dry, in this case it will be primed with the Epoxy 100 or Epoxy Gel Primer. Epoxy Gel primer is recommended on vertical



KRYPTON CHEMICAL SL

C/ Martí i Franquès, 12 - Pol. Ind. les Tàpies
43890 - l'Hospitalet de l'Infant - Spain
Tel: +34 977 822 245 - Fax: +34 977 823 977
www.kryptonchemical.com - rayston@kryptonchemical.com

Latest update: 29/11/2022

Page: 1/2

KRYPTON - ProLine CH80



Highly cross linked, high hardness, structural polyurea

surfaces. If the concrete substrate has a humidity level higher than 4%, it should be primed with the Primer GC.

Steel surfaces should be prepared with a class 2 ½ blast with a surface profile of approximately 80 microns.

For specific application methodologies consult with the Krypton Technical team.

RECOMMENDED ENVIRONMENTAL CONDITIONS

The temperature of the substrate should be between 5°C and 40°C. In all cases substrates should be 3°C above dew point before applying primers or membranes.

MIXING

Add the required Pigment to the A-component and thoroughly power stir before using and periodically during spraying operations. It is recommended to pre-heat both components by recirculating both components through the spray machine with the heaters set at recommended settings.

APPLICATION GUIDELINES

- ProLine CH80 can only be applied using high pressure heated plural component spray equipment by trained and experienced applicators.
- In ambient temperatures below 20°C chemical drums should be pre-heated using band heaters to 30 – 40° C.
- The A-side component should be thoroughly power stirred prior to the commencement of spraying and periodically during the spraying process to ensure there is no settling out of the A-side chemical components.
- The Pigment is always mixed into the A-side using a power stirrer.
- Both the A-side and B-side drums should be fitted with desiccant dryers.
- Compressed air supply should be supplied via an air dryer.
- Primary heaters should be set at between 65-70°C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances.
- It is important to ensure sufficient heat is maintained. Failure to maintain sufficient heat can compromise the mix and final physical properties of the coating.
- Hose heaters should be set at 70 ° C. Adjustments can be made on-site based on environmental conditions, mixing module size and application circumstances.
- For best results ensure spray pressure (not static pressure) is a minimum of 155 bar (approximately 2250 psi)
- For full substrate preparation and / or repair procedures consult with your Krypton Technical representative

Contact Krypton Chemical for more detailed technical information.

CURING TIME

Approximate hardness values are provided as reference only (2 mm, polypropylene substrate, 20°C 50% RH)

Time	Hardness shore D
5 min	35
45 min	43
6 hours	50
24 hours	55

REAPPLICATION

Usually, not necessary as desired thickness can be obtained in one single application. In the event additional thickness is required apply additional material within 2 hours of original coating application. If spraying over a previously applied epoxy primer, ensure the primer is completely cured (circa 8 hours) but no older than 48 hours. (Overcoat window). In extreme heat the overcoat window is dramatically reduced downwards from 48 hours.

RETURN TO SERVICE

Under most conditions (25°C, 50% rh), the membrane is resistant to light pedestrian traffic in 1 hour. After 1 day, more than 90% of the final properties are reached.

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.

SAFETY

Component B contains isocyanates. Always follow the safety instructions in the Material Safety Data Sheet. Respiratory protection is mandatory (combined organic vapor 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 only.

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 to avoid potentially dangerous reactions. Component A and B may be mixed on a 1/1 ratio to create a reaction that results in an inert material. Never manually mix volumes greater than 5 litres in order to prevent the development of excessive exothermic heat.

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 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

C/ Martí i Franquès, 12 - Pol. Ind. les Tàpies
43890 - l'Hospitalet de l'Infant - Spain

Tel: +34 977 822 245 - Fax: +34 977 823 977

www.kryptonchemical.com - rayston@kryptonchemical.com

Latest update: 29/11/2022

Page: 2/2