

ARMOUR-CHEM PURE POLYUREA ELASTOMER

PRODUCT DESCRIPTION

THE SPRAY APPLIED, ELASTOMERIC COATING THAT CAN BE PUT INTO SERVICE IN MINUTES.

The technology of Polyurea sprayed elastomers is based on amine - terminated polyether resins, amine chain extenders and isocyanates. It provides a flexible monolithic extremely tough elastomer with good physical properties, high degrees of thermal and hydrolytic stabilities and excellent water and chemical resistance.

FEATURES

- ARMOUR - CHEM spray is a seamless membrane that can be handled and walked on one minute or less from the time it is sprayed.
- ARMOUR - CHEM spray is hydrophobic and therefore unaffected by damp substrates when creating non - bonded liners. It can be sprayed at temperatures as low as -30°C with minimal effect on tack free time
- Due to the almost instantaneous gel of ARMOUR - CHEM spray, it can be built up to any thickness in one application including vertical and overhead applications. This eliminates the need for multicoat applications
- ARMOUR - CHEM spray is 100% solids, no solvents, no V.O.C.s
- The cured elastomer has a high thermal stability with constant working temperatures up to 130°C and intermittent temperatures up to 160°C
- ARMOUR - CHEM spray can be applied with a standard 1:1 ratio plural component high pressure machine (capable of maintaining a running pressure of 2000 PSI). Consult Isothane technical staff for a specific recommendation. The Polyurea exhibits a high service temperature due to its amorphous structure. The coating will stand an in service temperature range of -50°to +130° C

TYPICAL APPLICATIONS

- Roof waterproofing, flat roofs, corrugated asbestos, profile steel sheet etc.
- Liner for concrete tanks, ponds, lagoons, reservoirs, dykes, irrigation ditches, tunnels, barges, etc.
- Tank linings for primary and secondary containment.
- Hail, bird and traffic protection over polyurethane foam.
- Steel tanks, silos and pipes.
- Earth containment lining.
- Fish boat holds.
- Encapsulant for styrofoam and other types of floatation.



Isothane Limited Newhouse Road Huncoat Business Park Accrington Lancashire BB5 6NT

Telephone +44(0)1254 872555 Fax +44(0)1254 871522

www.isothane.com info@isothane.com

Reg No 29752728

MATERIAL SPECIFICATION**LIQUID COMPONENTS**

Solids – by weight	100%
Solids – by volume	100%
V.O.C (volatile organic compounds)	0
Mix Ratio	1:1 by volume
Flash Point	>200°C
Resin:	
Viscosity @ 25°C, cPs	450 – 700
SG @ 25°C, g/cm ³	0.98 – 1.02
Iso:	
Viscosity @ 25°C, cPs	700 – 1100
SG @ 25°C, g/cm ³	1.10 – 1.13
Gel time (sprayed at 70°C)	10 - 14 secs
Touch dry	< 30 secs
Recoat	0-12 hours

CURED ELASTOMER

Tensile Strength	23 MPa
Elongation	400%
Tear Strength	102 N/mm
Hardness	~ 55°shore D
Abrasion resistance Taber, H10, 1 kg wt, 1000 rev	35mg loss
Coefficient of linear thermal expansion °C	1.63 x 10 ⁻⁴
Water Vapour Permeability	0.39g/m ² /24 hours/mm Hg

Due to the large diversity of uses for the Polyurea, the material can be supplied in various colours. Specials are available subject to minimum order quantities. It should be noted that Armour-Chem is based on aromatic amines, therefore with certain shades over a period of time, changes in colour and superficial oxidation can occur. Shelf Life 6 months.



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APPLICATION

The recommended dry film thickness (DFT) of Armour Chem is 2 mm. Armour Chem is a protective coating, not a paint, and as such protection is only achieved with a high film build to minimize the possibility of thin patches, missed areas and pin holing.

If the substrate requires a primer, Armour Prime can be coated onto the substrate prior to application of Armour Chem if necessary. Armour Prime cures to give a slightly tacky film in approximately 2 – 4 hours.

STORAGE, HANDLING AND PERSONAL PROTECTION

- Recommended storage temperature: max 25°C.
- ARMOUR CHEM Resin has a shelf life of 6 months.
- ARMOUR FLEX H50 Iso has a shelf life of 6 months if stored at 25°C. When in use, a desiccant cartridge on the small bung of the isocyanate drum is recommended to eliminate moisture ingress into the drum and help prolong storage life.
- Opened, part used containers must be resealed immediately after use.
- It is recommended that the drums be left attached to the machine as this closed system will protect both the machine and the material, so long as the desiccant cartridge on the isocyanate component is checked regularly for saturation.
- The recommendations in our Safety Data Sheet for this product must be followed at all times. More general information is included in our publication “A Guide to the Safe Handling of Polyurethane Chemicals” and in the following Technical Data Sheet which is available on request:-
 - Decontamination of Isocyanates using Isothane Decontaminant

CHEMICAL RESISTANCE TESTING ASTM D-1308 METHOD 3.1.3 IMMERSION TEST

CHEMICAL	EFFECT	% SWELL AREA
Unleaded Petrol	A/B	5
5% methanol in petrol	C	50
Xylene	C	30
Methanol	B	5
Acetone	B	10
Sodium Hydroxide 0.5N	A	-
Sodium Hydroxide 1N	A	-
Brominated Water	A	-
Glacial Acetic Acid	A	-
Sulphuric Acid 5%	A	Pigment Discolouration
Sulphuric Acid 10%	A	Pigment Discolouration
Sulphuric Acid 50%	B	5 + Pigment Discolouration

A = NO VISABLE DAMAGE

B = LITTLE VISABLE DAMAGE, SLIGHT SWELLING, DISCOLOURATION

C = SOME EFFECT, SWELLING, DISCOLOURATION, CRACKING

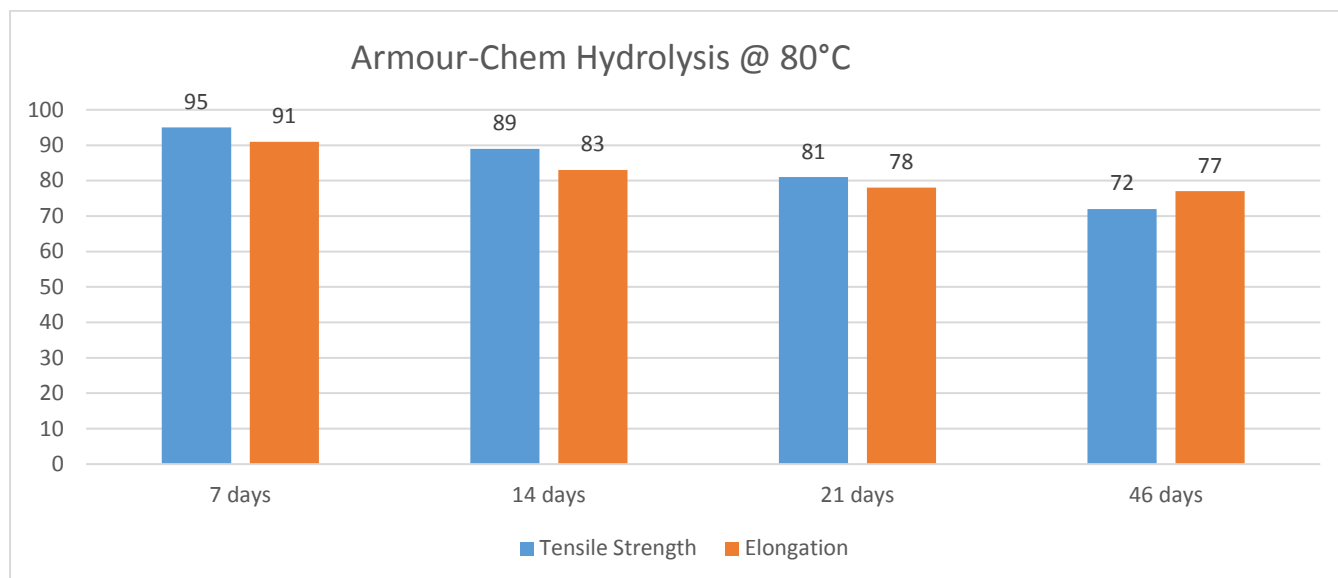


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