ELASTON-W80

DESCRIPTION & SPECIFICATION

DESCRIPTION

Elaston-W80 is a pure-polyurea, two-component, spray-applied, rapid set elastomer used for waterproofing and protective coatings. It is solvent free with outstanding abrasion & chemical resistance, medium hardness and high elongation.

FEATURES

- Elaston-W80 is certified to AS/NZS 4020:2005 "Testing of Products for use in contact with Drinking Water" when exposed at area to volume ratios up to 5,000 mm2/L.
- Exceptional toughness and flexibility
- Cures to full performance 3-4 times quicker than Tufflon-P90, making it perfect for high movement expansion joints or over Geofabric
- Resistant to puncture and compression
- Contains no volatile or flammable solvents and no catalyst
- High chemical resistance to acids, alkalis and bleach
- Gels in seconds to form seamless linings with a vice-like grip to most surfaces
- Remains permanently elastomeric.
- Will not crack or flake
- Withstands high temperatures of up to 220°C

COLOUR

Supplied in bottle green or dark grey colour

FINISH

Either gloss or non-slip stipple finish

PRIMERS

Concrete - Civilox or Aralox Epoxy
Steel - Civilox epoxy
Immersion - Civilox epoxy

DRY FILM THICKNESS RECOMMENDATION

- High Abrasion Resistance > 5mm
- Protective Coating > 3mm
- Tanking Potable Water > 3mm
- Waterproofing > 1.5mm
- Corrosion & Chemical > 3mm

SOLIDS CONTENT

100%

VOC VALUES

Zero

COVERAGE RATE

1L per sqm = 1mm DFT
3L per sqm = 3mm DFT etc.
1L = 1.05kg

APPROVALS

Australia made under ISO9001

LIMITATIONS

Some colour change and surface chalking may occur over time. Apply at uniform thickness. The rapid curing reaction means this product can only be applied using specialized plural component equipment. Once gelled and tack free, Elaston-W80 can remain "cheesy" for 15 minutes or longer in colder weather. Care should be taken not to damage the coating in this time.

TYPICAL WET PROPERTIES

PROPERTY	PART A	PART B
Density Part (kg/L)	1.11	1.00
Viscosity Part (Cps@25oC)	1600	750 - 890
Pack Size (steel drums)	225kg	200kg

TYPICAL CURED PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	RESULTS
Mix Ratio (v/v)	Plural equipment	1:1
Hardness	ASTM D 2240-91 Shore A	78
Elongation at 24°C	ASTM D412-92	427%
Abrasion Resistance	ASTM D460-10 (CS-17 @ 1000 rpm with 1000 g weight	50 mg
Tensile Strength	ASTM D412-92	16.5 MPa
Tear Strength	ASTM D624-86	9.6 MPa
Solids (100%)		100
Flash Point	Pensky Martens Closed Cup	>149°C
Theoretical Coverage		1mm/m^2/litre
Early Fire Hazard	AS1530 Part 3 (1989)	2mm sample
Properties	Ignitability Index (0-20) Spread of Flame Index (0-10) Heat Evolved Index (0-10) Smoke Developed Index (0-10) ASTM D 1692-68	16 8-9 9-10 7 Self-Extinguish
Suitability for use with drinking water	AS 4020-2006	Passes all requirements at 5000mm^2 per litre exposure.
Cathodic Disbondment with 3mm thick coating	ASTM G8-90 Method B using an impressed current	Rating D

SURFACE PREPARATION

- **Concrete** - Prepare, profile and clean using industry standard techniques. Prime with Civilox, Aralox or approved alternative. Apply W80 to specified thickness and uniform smooth finish
- **Steel** – Blast, profile and clean using industry standard techniques. Prime with Civilox. Apply W80 to specified thickness and uniform smooth finish. No drips, overhangs or defects
- **Geofabric** – Allow up to 1.2% shrinkage within first 30 minutes when pinning Geofabric to the substrate. Contact Liquimix.
- **Other Substrates** - W80 adheres strongly to most well prepared surfaces except HDPE or similar.
- **Recoat** - If within 30 minutes, minimal preparation is required. If greater than 30 minutes, mechanically abrade surface, clean and mask off to avoid overspray on adjacent or previously coated areas.

CURING SCHEDULE

Gel Time	**5 seconds**
Tack Free Time	**60 seconds**
Walked on (carefully)	**5 minutes**
Cure Time (95%)	**24 hours**
Full Immersion in water	**24 hours**
Full Physical Properties	**7 days**

STORAGE & HANDLING

Storage Conditions Keep drums covered. Top part drums with nitrogen and seal well. Apply grease to all A (Iso) side threads to avoid seizing. Remove Iso material from plural equipment and flush well with diesel or light engine oil when not in use. Contact Liquimix for method. Refer to the SDS (Safety Data Sheet) for Elaston-W80

SPRAY PARAMETERS

- Applicator must be approved by Liquimix.
- Read Elaston-W80 TDS and SDS and Graco Spray Equipment Operation Manuals prior to use.
- Stir amine (part B) well before use and continue stirring slowly during application. Avoid air entrainment.
- In cold weather, T2 drum transfer pumps recommended, otherwise Husky 515 or similar
- Use suitable, plural-component, heated, high-pressure, impingement mix, and airless spray equipment.
- Mix ratio A:B = 1:1 by volume
- Working pressure at gun = 2,000-2,500 psi
- Temperature at gun = 63^{0}C - 75^{0}C to optimise spray pattern
- Use correct mix chamber in gun to suit application and ensure maintenance of correct fluid pressure during spray. During operation maintain consistent spray pattern with regular mix chamber drilling, cleaning around mix chamber tip and air cap
- Ensure adequate clean, dry, air supply to run pumps & stirrer with minimum 10 cfm and 90 psi for the gun during operation.
- Prior to starting each spray session, verify correct equipment operation by spraying “off the job” onto cardboard or similar
- If gun gets cold due to inactivity, spray “off the job” until heated product comes through mix chamber.
- If pressure difference between A & B products exceeds 10%, stop spraying. Inspect check valves, mix chamber or Y strainers.
- Build to specified thickness in several quick overlapping passes.
- In tanks spray floor first and then walls from the bottom up

PROJECT ENGINEER

Project engineer verify contractor is approved. Ensure ITP is completed and copy sent to Liquimix for product warranty. Continuous use of High Voltage Porosity Tester and DFT gauge recommended. Rectify defects immediately. Lining should be smooth and even with no runs, drips or pin-holes. Mask to minimise overspray on adjacent and finished areas.

Figure 1.
Open concrete water supply channel BEFORE remediation with Geofabric and Elaston-W80 polyurea

Figure 2.
Open concrete water supply channel DURING remediation with Geofabric and Elaston-W80 polyurea

Figure 3.
Open concrete water supply channel AFTER remediation with Geofabric and Elaston-W80 polyurea