LIQUIMIX

Tufflon®- P80

Spray Polyurea Elastomer - Medium Hardness (80A)
Potable Water Approval (AS/NZS 4020:2018)

PRODUCT DESCRIPTION

Tufflon – P80 is a two-component, spray-applied, pure polyurea, tough elastomeric, protective coating. It offers much faster development of strength and lower shrinkage than other polyurea products, making it ideal for use with geofabric or where movement in the substrate is expected soon after application such as when night-time temperatures drop rapidly. It tolerates higher heat, allowing hot asphalt to be applied directly to it.

INTENDED USES

- Tank and Drinking Water reservoir lining with a 20+ year service life
- Sewerage treatment plant refurbishment and lining where its resistance to chemicals and wear guarantees a long service life
- Lining of Secondary Containment (bund) facilities for Chemical and Fuel storage
- Can be applied to geofabric
- Waterproofing bridge decks where hot asphalt can be applied directly to it
- Transport tippers for protection against wear and chemical attack
- General purpose use for anywhere where a high-performance, permanently elastomeric protective coating is required

FEATURES

- Cures in seconds
- High abrasion resistance
- High chemical resistance to acids, alkalis, and many petrochemicals
- Contains 0g VOC
- Application is not affected by temperature or moisture
- Remains permanently elastomeric and as such will bridge hairline cracks of up to 1.5mm

PRODUCT DATA

Volume Solids	100%
Theoretical Coverage	0.33 Square meter / Litre @ 3000 Microns DFT
Finish	Pigmented
Colour	Green, mid-grey, black, dark blue or white
Gloss	Semi-Gloss
Mixing Ratio	1:1 by volume
Gel Time	5 Seconds
Typical Thickness	3000 Microns Dry Film Thickness
Cleaner	Reactor Flush
Flash Point	>149 °C
VOC	0 Grams/Litre
Specific Gravity	1.06

CURE & RECOAT

Substrate Temp	Tacked	Hard Dry	Full Cure	Walked on Time Note 1	Water Immersion Time
	30 sec	1 Hr	7 Days	20 Min	24 Hrs

Note 1: Once Tufflon – P80 gels and becomes tack free it will remain “cheesy” for up to 15 minutes or longer in colder weather. Care should be taken not to damage the coating during this time

Topcoating Tufflon - P80 with itself:

Substrate Temperature	Maximum Recoat Time
5°C to 45°C	20 minutes

The maximum Tufflon - P80 recoat window is 20 minutes. Prior to commencing next day’s spraying the cold edge must be mechanically abraded to a minimum of 100 mm wide to reactivate the Tufflon - P80 and give acceptable adhesion. Vacuum all grinding swarf as you go. The non-abraded, cured coating must be masked to prevent overspray and provide a neat edge of the new section

Tufflon®- P80

ENGINEERING DATA

Property	Method	Results
Elongation at 24°C	ASTM D412-92	400%
Abrasion Resistance	ASTM c501-84, H18 wheel @ 1,000rpm with 1,000g weight	130mg
Tensile Strength	ASTM D412-92	16.5 MPA
Tear Strength	ASTM D 624-86	60 – 65 N/mm
Flexural Modulus	ASTM D 790	44MPa (18.7 mm thick, 153 mm span) 35MPa (18.7 mm thick, 102 mm span) 29MPa (18.7 mm thick, 52 mm span)
Hardness	ASTM D 2240-91, Shore A Shore D	75 – 80 35 - 40
Water Absorption	AS 3558.1	< 2 %
Water Vapour Transmission	E96-05 (B)	0.15 g / (h.m2) 3.60 g / (24h.m2)

LIMITATIONS

- Standard Aromatic based Polyurea products such as Tufflon – P80 will change colour over time, with lighter colours changing more than darker colours. Although this does not affect the long-term physical performance of the lining. If colour change is not acceptable and for aesthetic reasons, a colour-fast topcoat should be applied
- Tufflon – P80 will only achieve its full physical properties if applied by an experienced operator using properly functioning, plural-component, spray equipment
- Product requires up to 14 days to develop full physical properties and adhesion. Pull-off or other adhesion testing might not produce accurate results during this period

SURFACE PREP

Concrete

The concrete should be at least 28 days old. Ensure that the moisture content of the concrete is less than 7% before applying any coatings. A moisture test as outlined in ASTM D4263 “Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method” can be used to confirm the moisture content.

1. Prepare the concrete surface to a clean, dry finish
2. Ensure that any laitance or other invisible contaminants have been removed. Be especially careful with concrete surfaces that have been in contact with form ply or moulds that may contain release agents. These release agents commonly containing heavy hydrocarbon waxes or silicones that can adversely affect the adhesion of the Civilox primers
3. Fill bug holes with PU sealant or Civilox – LV100 primer mixed with Renderfill
4. Render exposed aggregate back to the original profile with a mixture of Civilox - LV100 and Renderfill
5. Remove high spots and protrusions, radius sharp edges and corners. Cove internal 90-degree angles with 45 degree, 20mm flat chamfer
6. Preparing of the concrete surface should be done in accordance with SSPC-SP13/NACE 6. Smooth, shiny concrete must be roughened to a profile similar to 80 grit sandpaper and comply with CSP 2 - 5 or as documented in a coating system specification.
   Surface preparation methods employed can be vapour abrasive blasting, dry abrasive blasting, hydro blasting, mechanical scabbling or diamond grinding.
   Acid etching is not an acceptable surface preparation method.
7. For more detailed information consult the User Guide GDE005

Timber

1. Prepare the timber surfaces to a clean, dry sound finish
2. Ensure that any surface contamination is removed
3. For more detailed information consult the application guidelines

Steel

1. Remove all rust, mill scale, oil and any previously applied coatings back to bare clean steel using abrasive blast. Welds should have slag and spatter fully removed.
2. Blast clean to Sa 2.5 - AS 1627.9 and a blast profile of 80 to 100 microns
3. For permanent immersion remove any soluble salts on the steel surfaces

APPLICATION

Equipment

Proportioning pump:	Graco E-XP2 or similar - heated, high-pressure, plural component
Gun:	Graco Fusion-AP or similar - Impingement mix, airless
Pressure of material at gun:	>2,000 psi
Temperature of material at gun:	65°C

Environment

Relative humidity:	The relative humidity must be less than 85%
Dew point:	The substrate temperature must be at least 3°C higher than the dew point temperature
Substrate Temperature:	The substrate temperature must be a minimum of 5°C

Mixing

Stir Part B at high speed with a Graco Twistork drum stirrer for about 10 minutes then reduce speed to slow during the spraying. For smaller containers use a powered mechanically powered flat paddle stirrer.

Thinning

Tufflon – P80 should never be thinned.

Clean-Up

Reactor Flush may be used for general clean-up of equipment and hoses. For soaking of contaminated metal parts use SWELL. Keep all gun part A side components in soak containers on the left side of the work bench and all part B side components on the right side of the work bench. The use of plastic soak containers with clip on lids and removable baskets makes the job easier. Replace the SWELL regularly as soon as it starts turning cloudy and dirty.

COMPATIBILITY

Primers

Civilox - LV100
Civilox - HB200

Topcoats

Tufflon - P80

Tufflon®- P80

Typical Systems

Substrate	Environment	Substrate Prep	Coat	System	DFT
Concrete	Tank Internal	CSP 2 - 5	1st Coat 2nd Coat 3rd Coat	Civilox – LV100 Civilox – LV100 Tufflon - P80	(200µ) 50µ 3000µ
Concrete	Tank Internal	CSP 2 - 5	1st Coat 2nd Coat 3rd Coat	Civilox - LV100 Civilox - HB200 Tufflon - P80	(200µ) 125µ 3000µ
Steel	Secondary Containment	Blast SA 2.5	1st Coat 2nd coat	Civilox - HB200 Tufflon - P80	125µ 3000µ

STORAGE & HANDLING

Store in dry, shaded conditions away from sources of heat and in the original properly sealed containers. Protect from heat and frost. Protect contents from moisture.
A shelf life of 24 months minimum is typical with unopened containers if stored at ambient conditions at 25°C. If either component is opened and partially used, it should be purged with nitrogen or desiccated air and resealed.

PACK SIZE

400L Kits
225Kg of Tufflon – P80 Part A in a 200L Container
200Kg of Tufflon – P80 Part B in a 200L Container

40L Kits
22.5Kg of Tufflon – P80 Part A in a 20L Container
20.0Kg of Tufflon – P80 Part B in a 20L Container

HEALTH & SAFETY

Tufflon - P80 is for professional use only.
This product contains isocyanates and may require the use of air feed hoods.
This product should not be used without consulting the Safety Datasheets first.
Please observe all health and safety as well as environmental legislation that applies in your state.

DISCLAIMER

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