Tufflon®- P90AS

Spray Polyurea Elastomer, anti-static version, medium hardness (90A)

PRODUCT DESCRIPTION

Tufflon-P90AS is a two-component, spray-applied, pure-polyurea that forms a tough, elastomeric, thick-film, protective coating. With its medium to high hardness and competitive pricing, Tufflon-P90AS is an anti-static polyurea with a wide range of applications

INTENDED USES

- Tufflon-P90AS is most suited for flammable or explosive environments where a build-up of static could cause a spark
- Not suitable for application to Geofabric
- May be used anywhere that an anti-static, high-performance, permanently elastomeric protective coating is required

FEATURES

- Anti-static properties
- Cures in seconds
- High abrasion resistance
- Resistant to puncture
- 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	Blue
Gloss	Semi-Gloss
Mixing Ratio	1:1 by volume
Gel Time	5 seconds
Typical Thickness	3000 Microns Dry Film Thickness
Cleaner	Reactor Flush and Swell for cured product
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	30 min	7 Days	2 min	24 Hrs

Note 1: Once Tufflon-P90AS gels and becomes tack free it will remain ‘cheesy’ for up to 30 minutes or longer in colder weather. Care should be taken not to damage the coating during this time.

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ENGINEERING DATA

Property	Method	Results
Elongation at 24°C	ASTM D412-92	>350%
Abrasion Resistance	ASTM c501-84, 1,000rpm with 1,000g weight, H18 wheel CS17 wheel	 90mg 3.1mg
Electrical Resistance	AS1334.9-1982 Shiny surface AS1334.9-1982 Dull surface	169M 145M
Tensile Strength	ASTM D412-92	15 MPa
Tear Strength	ASTM D 624-86	80 - 85 N/mm
Hardness	ASTM D 2240-91, Shore A Shore D	90 - 92 40 - 42
Water Absorption (23°C, 24hrs)	AS 3558.1	< 1 %
Water Vapour Transmission	E96-05 (B)	0.09 g / (h.m2) 2.11 g / (24h.m2)

LIMITATIONS

- Standard Aromatic based Polyurea products such as Tufflon-P90AS 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 or consider using Colourtuff, an aliphatic polyurea
- Tufflon-P90AS 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 product accurate results during this period

SURFACE PREP

Concrete

The concrete surface preparation must be conducted in accordance with the SSPC-SP13/NACE No.6 surface preparation standard for concrete. This standard covers the preparation of concrete surfaces before the application of protective coating or lining systems.

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 can be used to confirm the moisture content.

1. Remove all oil, grease and release agents in the concrete. Ensure that any laitance or other invisible contaminants have been removed. Be especially careful with concrete surfaces that have been in contact with formply or moulds that may contain release agents. These release agents commonly contain heavy hydrocarbon waxes or silicones that can adversely affect the adhesion.

   Contaminant may also be present below the surface as it may have penetrated the concrete. This can be the case in food processing facilities for example. Depending on the depth of the contaminant this may require solvent and / or hot water high pressure cleaning.

   Prepare the concrete surface to a clean, dry finish by ensuring that the water and air used in the decontamination of the concrete are clean

2. Fill bug holes with PU sealant or Civilox-LV100 mixed with Patchfill
3. Restore exposed aggregate surfaces back to the original profile by rendering with a mixture of Civilox-LV100 and Renderfill (a proprietary blend of a clean, dry sand)

4. Remove high spots and protrusions, radius sharp edges and corners. Cove internal 90 degree angles with 45 degree, 20mm flat chamfer
5. Preparation 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 or 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 or grinding may also be employed

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 50 to 100 microns
3. For permanent immersion, remove any soluble salts on the steel surfaces

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

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 medium speed with a GRACO Twistork drum stirrer for about 10 minutes then reduce speed to slow while spraying. Avoid air entrapment while stirring. For smaller containers use a mechanically powered flat paddle stirrer.

Thinning

Tufflon-P90AS should never be thinned.

Clean-Up

Reactor Flush may be used for general cleanup of equipment and to flush the plural pumps and hoses. To remove cured polyurea and overspray from metal parts soak in SWELL. Use separate soak containers for Part A and Part B components. The use of plastic soak containers with removable baskets and clip-on lids makes the job easier. Replace the SWELL regularly as soon as it starts turning cloudy and dirty.
NOTE: NEVER USE SWELL TO CLEAN PAINTED SURFACES AS IT WILL STRIP THE PAINTS. NEVER USE SWELL TO FLUSH PUMPS AND HOSES.

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COMPATIBILITY

Primers

Civilox - LV110
Aralox - FL150
Civilox - HB200

Topcoats

Tufflon-P90AS

Typical Systems

Substrate	Environment	Substrate Prep	Coat	System	DFT
Concrete	Secondary Containment		1st Coat	Aralox-FL150	200µ
			2nd Coat	Civilox-HB200	125µ
			3rd Coat	Tufflon-P90AS	3000µ
Steel	Explosive's Transport	Blast SA 2.5	1st Coat	Civilox-HB200	125µ
			2nd Coat	Tufflon-P90AS	3000µ

STORAGE & HANDLING

Store in dry, shaded conditions away from sources of heat and ignition and in the original properly sealed containers. Protect from heat and frost. Do not allow water to pond on the top of drums.
A shelf life of 18 months minimum is typical if stored under ambient conditions at 25°C

PACK SIZE

400L Kits
225Kg of Tufflon-P90AS Part A in a 200L Container
200Kg of Tufflon-P90AS Part B in a 200L Container

40L Kits
22.5Kg of Tufflon-P90AS Part A in a 20L Container
20.0Kg of Tufflon-P90AS Part B in a 20L Container

HEALTH & SAFETY

Tufflon-P90AS is for professional use only.
This product contains isocyanates and may require the use of air fed hoods.
This product should not be used without consulting the Safety Datasheets as published on the Liquimix website first.
Please observe all health and safety and environmental legislation that applies in your state.

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