

Technical Data Sheet



ColourTuff®

**Colour-Fast Aliphatic, Pure-Polyurea, Spray-Applied,
Rapid-Set, Thick-Film, Elastomeric, Protective Coating - Medium to High
Hardness (90A)**

GENERIC DESCRIPTION

ColourTuff® is a colour-stable, fast-cure, aliphatic, two-component, spray-applied pure polyurea. It is a 100% solids, elastomeric protective coating that is free of solvents or partially soluble diluents.

Specialised, high-pressure, heated, plural proportioning equipment, fitted with an impingement mix, airless spray gun is required to apply this product.

UNIQUE PROPERTIES OF

ColourTuff®

ColourTuff® is 100% colour stable which means it will not yellow or change colours even when exposed to sunlight for long periods of time. It is highly abrasion resistant and remains permanently elastomeric.

TYPICAL USES / APPLICATIONS

- High abrasion resistance for caravans / trailers / trucks from gravel, rocks etc
- Protects against corrosion / rust on caravans / trailers / trucks etc
- Can be used on concrete, metal, wood, ceramic and PU foam.
- Roofs / Garages / Parking lots
- Airports / Shipyards / Marinas
- Amusement parks and playgrounds
- Wind energy plants

ADVANTAGES / FEATURES

- Gels in seconds to form a seamless lining with a vice-like grip to most surfaces

- High abrasion resistance
- Resistant to puncture
- Contains no volatile or flammable solvents and no catalyst
- High chemical resistance to acids, alkalis, sodium hypochlorite and many petrochemicals including diesel, unleaded fuel and Jet Fuel
- Remains permanently elastomeric
- Will not crack or flake
- Withstands high temperatures of up to 120°C
- Application is not affected by temperature or moisture
- This product may be sprayed to thicknesses exceeding 1 mm per pass and cures to become rain insensitive within minutes of application

LIMITATIONS

- Polyurea will only achieve its full physical properties if applied by an experienced operator using properly functioning, plural-component, spray equipment.

TYPICAL LIQUID PROPERTIES		
Property	Part A (iso)	Part B (resin)
Density Part (gr/cm ³) ASTM D 1217	1,11±0,03	1,02±0,02
Viscosity Part (Cps@25°C)	800-1000	600-1000
Colour		
Pack size (steel drums)	225kg	200kg
Shelf life	9 months	9 months

TYPICAL CURED PROPERTIES		
Property	Test method	Results
Mix Ratio (by volume)	Plural equipment	A-100 B=100
Mix Ratio (by weight)		A=112 B=100
Hardness	ASTM D2240	40-45
Elongation at break point	ASTM D638	≥400
Abrasion Resistance (mg)	EN ISO 5470-1	<33 (H22, 1000 cycle)
Tensile Strength (MPa)	ASTM D638	>16
Tear Strength	ASTM D 624-86	98 N/mm
Pull off strength (N/mm ²)	N/A	N/A
Puncture Strength (MPa)	N/A	N/A
Hydrostatic Pressure Resistance (0.1MPa/cm ² , 30 mins)	N/A	N/A
Water Absorption (%) (23°C, 24hrs)	N/A	N/A

Water Vapour Transmission (g/hr*m ²)	N/A	N/A
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

PROCESSING PARAMETERS	
Proportioning pump	Graco E-XP2 or similar - heated, high-pressure, plural component
Gun	Graco Fusion-AP or CS - Impingement mix, airless
Pressure of material at gun	2,000psi
Temperature of material at gun	70 - 80 °C
Relative humidity	<85%
Dew point	>5°C above surface temperature

THICKNESS RECOMMENDATION	
High abrasion resistance	>5mm
Protective coating	>3mm

Tanking potable water	N/A
Waterproofing	N/A
Corrosion and Chemical	>3mm

CURING SCHEDULE

Note: Once Tufflon 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.

Gel time	15-30 seconds
Tack-free time	45-60 seconds
Walked on (carefully)	2 minutes
Cure time (99%)	2 - 15 minutes
Full immersion in water	24 hours
99% physical properties	7 days
Full physical properties and adhesion	7 to 14 days

APPLICATOR REQUIREMENTS

Applicator must be approved by LiquiMix. Applicator must read Tufflon-P80 TDS and SDS and Graco Spray Equipment Operation Manuals prior to use.

PROJECT ENGINEER NOTES

Project engineer verify contractor is approved. Ensure ITP is completed and copy sent to LiquiMix for product warranty. Continuous use of high voltage and DFT gauge recommended. Rectify defects immediately. Lining should be smooth and even with no runs, drips or pinholes. Mask to minimise overspray on adjacent and finished areas. Adhesion testing using a should be done no sooner than two days, preferably seven days after polyurea has been sprayed. Hydraulic adhesion testing should use a 50mm dolly for concrete, 20mm dolly for steel. Note: NEVER peel or pull cured polyurea by hand to test for adhesion.

HEALTH AND SAFETY ADVICE

Please read the safety data sheet prior to use of product. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release into the environment. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash before reuse.

Specific treatment (see advice on labels and Safety Data Sheet). If on skin: wash with plenty of soap and water. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell. If skin irritation or rash occurs get medical advice/attention. If eye irritation persists get medical advice/attention. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Always collect all spillage. Refer to LiquiMix Safety Data Sheets for individual products.

Important Notice

The information contained herein is offered without charge and is for use by technically qualified personnel at their own risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto.

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