

# ColourTuff® - C85

## Colourfast aliphatic spray polyurea elastomer

**PRODUCT DESCRIPTION** ColourTuff – C85 is a two-component, fast-cure, aliphatic, pure polyurea. It is colour stable with low yellowing properties even when exposed to sunlight for long periods of time. It is highly abrasion resistant and remains permanently elastomeric

### INTENDED

- USES**
- Protects caravans, trailers and trucks from gravel, rocks and corrosion
  - Waterproofing of Roofs, Garages and Parking lots
  - Airports, Shipyards, Marinas
  - Amusement parks and playgrounds
  - Wind energy plants
  - Can be used on concrete, metal, wood, ceramic and PU foam

### FEATURES

- Colour fast pure polyurea, even when exposed to UV
- Gels in seconds to form a seamless lining with a vice-like grip to most surfaces
- Contains no volatile or flammable solvents and no catalyst
- High chemical resistance to acids, alkalis, sodium hypochlorite and many petrochemicals including diesel, unleaded and Jet Fuel
- High abrasion resistance
- Remains permanently elastomeric and will not crack or flake
- Withstands high intermittent temperatures of up to 120°C dry
- This product may be sprayed to thicknesses exceeding 1mm per pass and cures to become rain insensitive within minutes of application
- Resistant to puncture

### PRODUCT DATA

<b>Volume Solids</b>	100%
<b>Theoretical Coverage</b>	1.5 L / sqm @ 1500 microns (1.5 mm) DFT
<b>Finish</b>	Pigmented
<b>Colour</b>	Various
<b>Gloss</b>	Semi-Gloss
<b>Mixing Ratio</b>	1:1 by volume
<b>Gel Time</b>	30 - 45 Seconds
<b>Typical Thickness</b>	1,500 microns standard waterproofing
<b>Cleaner</b>	Reactor Flush or Swell
<b>Flash Point</b>	>149°C
<b>VOC</b>	0 Grams/Litre
<b>Specific Gravity</b>	1.00

### CURE & RECOAT

Substrate Temp	Tacked	Hard Dry	Full Cure	Walk on Time Note 1
25°C	60 Sec	2 Hrs	7 Days	10 Min

Note 1: Once ColourTuff – C85 gels and becomes tack free it will remain “cheesy” for up to 60 minutes or longer in colder weather. Care should be taken not to damage the coating during this time

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Topcoating ColourTuff – C85 with itself:

Substrate Temperature	Maximum Recoat Time
5°C to 45°C	60 minutes

Maximum topcoat time: Prior to commencing next day's spraying the cold edge must be mechanically abraded to a minimum of 100 mm wide to reactivate the ColourTuff – C85 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

## ENGINEERING DATA

Property	Method	Results
Hardness	ASTM D 2240-91 Shore A	87
	Shore D	42
Elongation at 24°C	ASTM D412-92	>600%
Water Absorption	AS 3558.1	<2%
Abrasion Resistance	ASTM C501-84, H18 wheel 1000 rev. with 1000g weight	450mg
Tensile Strength	ASTM D412-92	11-12 MPA
Tear Strength	ASTM D 624-86	50-55 N/mm
Water Vapour Transmission	E96-05(B)	0.26g / (h.m <sup>2</sup> )
		6.24g / (24h.m <sup>2</sup> )

## LIMITATIONS

- ColourTuff - C85 is not suitable for permanent immersion
- ColourTuff - C85 can only be applied using properly functioning, plural, airless 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 surface preparation must be conducted under 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 form ply 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 through ensuring that the water and air used in the decontamination of the concrete is clean

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2. Fill bug holes with PU sealant, Aralox FL150 mixed with Patchfill or other approved filler material
3. Restore exposed aggregate surfaces back to the original profile by rendering with a mixture of Aralox – FL150 and Renderfill (a proprietary blend of 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. Prepare the concrete surface in accordance with SSPC-SP13/NACE 6. Smooth, shiny concrete must be roughened to a profile similar to 80 grit sandpaper or CSP 2 - 5 or as documented in the 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

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## 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

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## APPLICATION

<b>Equipment</b>	Proportioning pump:	Graco Reactor E10hp or 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 minimum while spraying
	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 2°C
Application Temperature:	Minimum recommended material temperature is 24°C Maximum recommended substrate temperature is 50°C

**Mixing** Stir Part B at high speed, without entrapping air, using a Graco Twistork drum stirrer for about 10 minutes then reduce speed to slow during the spraying. For smaller containers use a mechanically powered, flat paddle stirrer

**Thinning** ColourTuff – C85 should never be thinned. Viscosity is controlled using heat

## Cleanup

Reactor Flush may be used for general clean-up 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 PAINT. NEVER USE SWELL TO FLUSH PUMPS AND HOSES. DO NOT ALLOW SWELL TO COME INTO CONTACT WITH THE OUTSIDE PROTECTIVE POLYURETHANE COVER OF HOSES

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## COMPATIBILITY

### Primers

Aralox - FL150  
Civilox - LV110  
Civilox - HB200

### Topcoats

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## Typical Systems

Substrate	Environment	Substrate Prep	Coat	System	DFT
Concrete	Rooftop		1 <sup>st</sup> Coat	Aralox – FL150	(200µ)
			2 <sup>nd</sup> Coat	Civilox – HB200	50µ
			3 <sup>rd</sup> Coat	ColourTuff – C85	3000µ
Concrete	Flooring		1 <sup>st</sup> Coat	Aralox - FL150	(200µ)
			2 <sup>nd</sup> Coat	ColourTuff – C85	3000µ
Steel	General protection	Blast SA 2.5	1 <sup>st</sup> Coat	ColourTuff – C85	1500µ

## 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. Do not allow water to pond on top of drums.

A shelf life of 12 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.

If crystallisation occurs, heat the material to 70°C whilst agitating to melt it. On no account should the materials be heated above 70°C. Storage temperatures above 40°C are not recommended since they can accelerate the formation of insoluble solids and increase the viscosity

## PACK SIZE

### 400Kg Kits

210Kg of ColourTuff – C85 Part A in a 200L Container

190Kg of ColourTuff – C85 Part B in a 200L Container

## HEALTH & SAFETY

ColourTuff – C85 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 Datasheet (SDS) as published on the Liquimix website first.

Observe all health and safety as well as environmental legislation

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