

# TECHNICAL DATA SHEET

## Poly-Tech AL550D

NON-SOLVENTED ALIPHATIC SPRAY ELASTOMER

poly-tech

COMPLETE ACID PROTECTION

**Poly-Tech AL550D** Spray Membrane is a UV light stable, non-solvented polyurethane spray elastomer based on aliphatic chemistry. It is characterized by a solids content of 100% and possesses good abrasion resistance.

Additionally it offers:

1. Convenient 1:1 (volume) mix ratio.
2. 100% solids -Zero V.O.C.
3. Fast build for very thick requirements - reduced labour and time.
4. Fast curing for quick turn around times - cost
6. Good abrasion resistance and toughness.
7. Bonds to any substrate when the appropriate surface preparation and recommended primers are used.
8. Remains flexible and is therefore very suitable to handling expansion and contraction of metal associated with climate change or equipment that is subject to movement.
9. Requires plural component application equipment only.
10. Designed for heavy-duty industrial applications where elastomeric coatings/linings are specified.

### PRODUCT SPECIFICATION

	Part A	Part B
Colour	Water Clear	Hazy to milky colour *
Viscosity @ 40°C (cps)	129	185
Viscosity @ 60°C (cps)	51	140
Specific Gravity @ 25°C	1.04	0.99

\* Note: Colour of the polyol will depend if a pigment addition to polyol has been requested.

### PROCESSING CHARACTERISTICS

- Store in a dry location as urethane components are susceptible to moisture contamination.
- In cold weather, the containers should be kept above 20°C to maintain them in liquid condition.
- Precondition drums at 25-30°C and apply at 50-60°C at the gun at a minimum but a temperature 70-80°C aids an even faster cure.
- The substrate should be at least 20°C or hotter.
- **The polyol should be thoroughly mixed by mechanically means using a stirrer inside the pail or drum first.** As the polyol is a blend of different components it requires mixing before use.

Mix Ratio, Part A / Part B (by volume)	1:1
Mix Ratio, Part A / Part B (by weight)	100/97
Pot Life @ 50°C (seconds – based on a 200 gram hand mix)	20-30
Tack free Time @ 50°C (seconds based on a 200 gram hand mix)	50-70

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Coating thickness of approximately 0.5-1 mm per pass is recommended. Several millimeters can be achieved very quickly by allowing 90-120 seconds cooling between passes.

Light duty abrasive coatings	1 - 2 mm
Medium duty abrasive coatings	2.5 - 5 mm
Heavy-duty abrasive coatings	5 or more
Corrosive protection	1 - 1.5 mm

## SURFACE PREPARATION

Steel and cast iron require abrasive grit blast to a "Near-White Metal" (SSPC-SP10) or Class 2½ blast for most non-immersion applications and prime with AD-1147 (metal primer). For immersion conditions, prime with AD-6 or 415.

No primer is required over automotive paint provided it is lightly abraded (sanded) to assist bonding.

Please consult **Poly-Tech** for specific details on recommended primers for other surfaces.

## EQUIPMENT

Use only 1:1 mix ratio (by volume) in heated plural component spray equipment. Both low and high-pressure equipment can be used.

## CURE AND RECOAT DETAILS

Curing rate of this product is dependant on the ambient and surface temperatures. As the temperatures increase, the curing rate decreases.

<b>Temperature @ gun</b>	<b>50-60°C</b>
<b>Hard coating (minutes)</b>	10-15
<b>Full cure (days)</b>	6
<b>Recoat – minimum (minutes)</b>	< 5

## PHYSICAL PROPERTIES

<b>Hardness (Shore D)</b>	55 ± 3
<b>Tensile Strength (MPa)</b>	19
<b>Elongation (%) +/-</b>	320
<b>Yield Strength (MPa)</b>	12.7
<b>Angle Tear Strength (kN/m)</b>	112
<b>Trouser Tear Strength (kN/m)</b>	77
<b>Specific Gravity</b>	0.988
<b>Din Abrasion (mm<sup>3</sup>)</b>	125
<b>Colour</b>	White

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