

Provisional TDS

PE7501 Clear Digoutable Polyester Resin

PE7501 is a clear amber, flexible encapsulation resin which due to its 'digoutable' properties allows easy removal of cured material from broken or defective units. It uses an innovative blend of technologies to provide the performance afforded by polyurethane resins whilst removing the associated health hazards.

- Isocyanate free; high performance, flexible resin which does not use hazardous isocyanates to cure
- Excellent hardness stability over a wide temperature range; flexible at temperature extremes
- Low moisture sensitivity during and after cure; exhibits excellent electrical properties
- Soft, re-enterable; aids ease of rework

Approvals **RoHS-2 Compliant (2011/65/EU):** **Yes**

Typical Properties

Liquid Properties:	Colour Part A - Resin	Pale Straw
	Colour Part B - Hardener	Pale Straw
	Density Part A - Resin (g/ml)	0.95
	Density Part B - Hardener (g/ml)	1.04
	Part A Viscosity (mPa s @ 23°C)	3500
	Part B Viscosity (mPa s @ 23°C)	5600
	Mixed System Viscosity (mPa s @ 23°C)	4300
	Mixed System Viscosity (mPa s @ 40°C)	2400
	Mixed System Viscosity (mPa s @ 60°C)	1900
	Mix Ratio (Weight)	6.8:1
	Mix Ratio (Volume)	7.45:1
	Usable Life (20°C)	50*
	Gel Time (23°C)	110 minutes*
	Cure Time (23°C)	48 hours*
	Cure Time (95 °C)	60 minutes
	Storage Conditions (additional information below)	Dry Conditions: Above 5°C, Below 35°C
	Shelf Life	12 months
	Exotherm	<40°C
	(Measured on 100ml sample; cylinder of diameter 49.4mm @ 23°C)	
	Shrinkage	<1%

*Values based on a 30g sample; full properties may be achieved after 7 days at ambient conditions, elevated temperatures will reduce these times.

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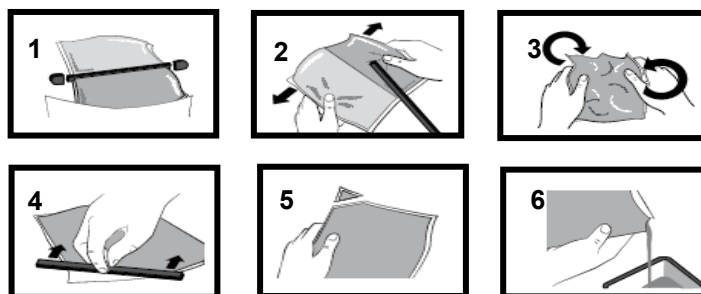
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Cured System:	Cured Density (g/ml)	0.96
	Temperature Range (°C)	-50 to 110
	Max Temperature Range (Short Term (°C)/30 Mins) (Application and Geometry Dependent)	120
	Shore Hardness	A16
	Colour (Mixed System)	Pale Straw
	Flame Retardance	No
	Shore Hardness @ 100°C	A15
	@ 25°C	A16
	@ -60°C	A45
	Water Absorption (9.7mm thick disk, 51mm diameter) 10 days @ 20°C / 1 hour @ 100°C	< 0.4% / <0.4%
	Elongation At Break	Not measured
	Dielectric Strength (kV/mm)	12
	Volume Resistivity (ohm-cm)	10 ¹²
	Dielectric Constant @ 50Hz	4.0

Mixing Procedures

Resin Packs

When in Resin pack form, the resin and hardener are mixed by removing the clip and moving the contents around inside the pack until thoroughly mixed. To remove the clip, remove both end caps, grip each end of the pack and pull apart gently. By using the removed clip, take special care to push unmixed material from the corners of the pack. Mixing normally takes from two to four minutes depending on the skill of the operator and the size of the pack. Both the resin and hardener are evacuated prior to packing so the system is ready for use immediately after mixing. The corner may be cut from the pack so that it may be used as a simple dispenser.



Bulk Mixing

When mixing, care must be taken to avoid the introduction of excessive amounts of air. Automatic mixing equipment is available which will not only mix both the resin and hardener accurately in the correct ratio but do this without introducing air. Containers of Part A (Resin) and Part B (Hardener) should be kept sealed at all times when not in use to prevent the ingress of moisture. Bulk material must be thoroughly mixed before use. Incomplete mixing will result in erratic or partial curing.

Additional Information

- Viscosity:** The viscosity of the Part A (resin) and the mixed system will dramatically reduce with elevated temperatures:
- Cleaning:** It is far easier for machines & containers to be cleaned before the resin has been allowed to cure. Electrolube's RRS is suitable for cleaning machines and containers and cured resin may be slowly softened and removed by soaking in our RRS.
- Curing:** PE7501 can be heat cured immediately however this will be volume dependent. Tests in the final unit should be conducted to determine the optimum accelerated cure profile. Curing at room temperature is also possible; the majority of properties will be reached after 24 hours however some slight surface tack may remain. Full properties will be achieved after 7 days.
- Storage:** Storage should be in a dry place, kept above 5°C and below 35°C. Excursions outside of this temperature range are permitted for transportation. The product must be allowed to return to room temperature prior to use. If any changes have occurred during exposure to extreme temperatures, heat to 40°C and stir the product.
- Health & Safety:** Always refer to the Health & Safety data sheet before use. These can be downloaded from www.electrolube.com

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