

Technical Data Sheet

Preliminary

EL-1500SL

Two component, slow curing, optically clear epoxy system for large surface bonding and potting.

Product Description

EL-1500SL is a two-component long work life epoxy system suitable for potting, encapsulating, bonding and sealing applications. It has 100:32 (Part A: Part B) mix ratio by weight. The product provides excellent optical clarity and flow properties at room temperature. The optimum curing is obtained under overnight room temperature curing followed by heat curing at 70-90°C for 3-5hours.

EL-1500SL has superior impact strength and has operating temperature range of -65°C to 150°C. It adheres well to a wide variety of substrates including metals, ceramics, many plastics, glass and composites. The product's low exotherm, optical clarity and physical strength makes it ideal for many high-end applications.

Product Characteristics

Base Chemistry	Epoxy
Color	Clear
Service Temperature Range	(-65°C) to +150°C
Viscosity, Part A, 23°C	10,000 - 16,000 cps
Viscosity, Part B, 23°C	5 -50 cps
Mixing Ratio, Part A : Part B	100:32 by weight
Cure Schedule	
23°C	3 - 5 days
70-90°C	2-3 hours
Optimal Cure	overnight at 23°C plus 3 - 5 hours at 70°C - 90°C
Working Life (100 grams of mixed epoxy), 23°C	>200 minutes
Tensile Strength, 23°C	> 9,700 psi
Tensile Lap Shear Strength, Aluminum to Aluminum, 23°C	> 3,400 psi
Compressive Strength, 23°C	>15,500 psi
Hardness, 23°C	> 70 Shore D
Volume Resistivity, 23°C	> 10 ¹⁴ ohm-cm
Dissipation Factor, 1KHz, 23°C	0.006
Dielectric Constant, 1KHz, 23°C	3.25
Shelf Life, 23°C (in original unopened containers)	1 year from the date of manufacturing

Key Product Features

Optically clear
Long worklife
Excellent flow properties
High adhesion

Typical Applications

Potting
Bonding
Sealing



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Surface Preparation

Bonding substrates must be degreased and cleaned of any oil, dust or any other contaminants and then dried prior to the application of the adhesive. Smooth surfaces must be chemically etched (wherever necessary) and/or roughened using sand paper, emery cloth or grit. blasting.

To ensure proper surface preparation, kindly perform a simple water bead test. If the water beads up, kindly repeat the cleaning and roughening procedures before applying the adhesive. Even spreading of water indicates good surface preparation, providing superior bond strength.

Mixing procedure

EL-1500SL is prepared by efficiently mixing Part A with Part B in a 100:32 mix ratio by weight. Slowly mix the two parts to avoid any entrapment of air bubbles. Gently stirring the individual components prior to mixing might be necessary to avoid settling of filler particles. You can further prolong the working life (>200 minutes for 100 grams of mixed epoxy) by mixing a smaller batch or speed up by heat curing.

Curing Procedure

EL-1500SL can be cured at room temperature as well as at elevated temperatures. EL-1500SL achieves its optimum properties when cured under room temperature followed by heat curing for 3-5 hours at 70-90°C. Alternately it can also be cured at 90°C for 2-3 hours. Remove any excess adhesive using a spatula and wipe it clean with a rag. Acetone or xylene may be used to assist in removal of the excess adhesive. Thinner epoxy sections cure slower.

Storage & Handling

EL-1500SL can be ideally stored at or below 23°C in closed containers. Tightly close the containers when not in use to avoid any contamination. No other special storage conditions are required.

Kindly refer to the MSDS (Material Safety Data Sheet) for safe handling. Allow for good ventilation and avoid skin contact while handling the product. Ketone or aromatic solvents can facilitate efficient cleaning of equipment or any spills. However, please exercise proper ventilation and flammability precautions while use of solvents.

Packaging

Product is available in a kit form in various pack sizes to suit end user needs.

Do not use for specification purposes

The values mentioned in this TDS are considered typical properties only. They are not intended to be used as a basis for preparing specifications. Please contact Elixir-India for assistance in establishing particular specifications

Disclaimer

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