

Technical Data Sheet

EL-1061F

Rapid curing, two component epoxy system for potting & bonding

Product Description

EL-1061F is a two component 5 minute curing epoxy system suitable for potting, bonding and sealing applications. It has an easy 1:1 (Part A: Part B) mix ratio by weight or volume. It is important to explain the common misapprehension on “5 minute” epoxy systems. In actuality, the working life is around 5 minutes; the real set up time can range from 10-20 minutes depending on the actual application and cure conditions. Based on these conditions, complete cure can range from 12-18 hours. It readily cures at room temperature and can achieve faster cures at elevated temperatures. EL-1061F offers an extensive serviceable temperature range of 4K (-269.15°C) to +120°C. The product fosters outstanding physical strength properties as well as dimensional stability. It offers minimal shrinkage upon cure and good chemical resistance properties.

EL-1061F adheres well to a wide variety of substrates including metals, composites, ceramics, most plastics and glass. Upon polymerization EL-1061F offers superior electrical insulation. It is also useful for prototyping and repair situations, where faster cure is desirable.

Product Characteristics

Base Chemistry	Epoxy
Color	Clear/Black
Service Temperature Range	4K (-269.15°C) to +120°C [-452.47°F to +250°F]
Viscosity, Part A, 23°C	10,000 - 15,000 cps
Viscosity, Part B, 23°C	10,000 - 16,000 cps
Mixing Ratio, Part A : Part B	1:1 by weight or volume
Cure Schedule	
23°C	12 - 18 hours
90°C	30 - 60 minutes
Optimal Cure	overnight at 23°C plus 1 - 2 hours at 70°C - 90°C
Working Life (100 grams of mixed epoxy), 23°C	5 - 7 minutes
Tensile Strength, 23°C	> 5,100 psi
Tensile Lap Shear Strength, Aluminum to Aluminum, 23°C	> 2,100 psi
Tensile Modulus, 23°C	310,000 - 360,000 psi
Hardness, 23°C	> 70 Shore D
Coefficient of Thermal Expansion, 23°C	60 - 65 x 10 ⁻⁶ in/in/°C
Volume Resistivity, 23°C	> 10 ¹⁴ ohm-cm
Specific Gravity, 23°C	Part A: 1.17; Part B: 0.97
Dielectric Constant, 60Hz, 23°C	4.51
Shelf Life, 23°C (in original unopened containers)	1 year

Product Highlights

Very rapid cure in 5min
Excellent controlled flow properties
Very good performance on extremely low temp.
Outstanding electrical insulation properties

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-1061F is prepared by efficiently mixing Part A with Part B in a 1:1 mix ratio by weight or volume. 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 prolong the working life (5 - 7 minutes for 100 grams of mixed epoxy) by mixing a smaller batch.

Curing Procedure

EL-1061F can be cured at room temperature as well as at elevated temperatures. EL-1061F can completely cure in 12 - 18 hours at room temperature. It can achieve faster cures at elevated temperatures i.e. 30 - 60 minutes at 90°C. The optimum cure schedule would be an overnight room temperature set-up, followed by a heat cure at 70°C - 90°C for 1 - 2 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-1061F must 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

1Kg,5Kg Kit of Resin & Hardener

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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