ES807
Surface Mount Adhesive

ES807 is designed for the bonding of surface mounted devices to printed circuit boards prior to wave soldering. It is particularly suited for applications where medium to high dispense speeds, high dot profile, high wet strength and good electrical characteristics are required.

- Suited for high speed dispenser (25,00-50,000DPH); good dot profile
- Excellent wet strength
- Excellent adhesion to substrate
- Good electrical characteristics

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

Typical properties

Liquid Properties:	Raw Material	Epoxy
	Appearance	Red viscous gel
	Density (g/ml)	1.31
	Viscosity @ 25ºC (Pa s)	25,000 – 50,000
	Particle Size (µm)	≤50
	Thixotropic Index	≥6.5
	Storage Conditions	Dry Conditions: 2-10ºC
Cured Properties:	Density (g/ml)	1.31
(30 minutes @ 150 °C)	Coefficient of Thermal Expansion, ASTM D696, K^{-1}	40-110
	Glass Transition Temperature, ASTM D4065, (°C)	≥100
	Lap Shear Strength, CMT6104, mild steel,	≥35 N/mm^2 (≥5075 psi)
	Thermal Conductivity, ASTM C177, (W/m K)	0.4
	Surface Resistivity, ASTM D257, (Ω)	10^{15}
	Volume Resistivity, ASTM D257, (Ω-cm)	10^{15}
	Dielectric Constant / Dissipation Factor, ASTM D150	
	1kHz	2.87 / 0.011
	10-kHz	2.73 / 0.02
	1000-kHz	2.68 / 0.02
	10,000-kHz	2.60 / 0.02

Description	Packaging	Order Code	Shelf Life
Surface Mount Adhesive - ES807	30ml syringe	ES807-40GS	6 Months

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All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification.

Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

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Certificate No. FM 32082

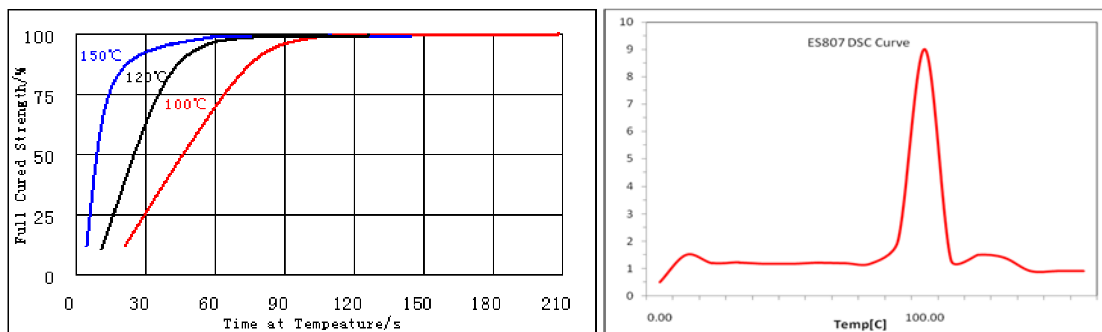
Directions for Use

Typical Curing:

Recommended conditions for curing are typically 60 seconds @ 150 °C (based on substrate exposure to heat above 100°C). Rate of cure and final strength will depend on the residence time at the cure temperature and the extent of thermal compensation of electronic units.

Cure speed vs. Time & Temperature:

The following graph shows the rate of torque strength developed with time at different temperatures. These times are defined from the moment the adhesive reaches cure temperature. In practice, total oven time may be longer to allow for heat up period.



Resistance to lead free solder:

Good compatibility with both water based and solvent based solder according to IPC SM817 (2.4.42.1).

Application Information:

1. ES807 is filled in a range of ready-to-use syringes suitable for a variety of air pressure/time dispensing systems.
2. After storage in a refrigerator the adhesive must return to ambient temperature before use, 2 to 4 hours is recommended.
3. Avoid cross contamination with other adhesive residues by ensuring dispense nozzels, adapters etc. are thoroughly cleaned.
4. Do not leave dirty nozzles on dispensing equipment while not in use over 24 hours, or soak in solvents for long periods of time.
5. The quantity of adhesive dispensed will depend on the dispense pressure, time, nozzle size and temperature.
6. These parameters will vary depending on the type of dispensing system used and should be optimized accordingly.
7. Dispensing temperature should ideally be controlled at a value between 30 °C to 38°C for optimum results,
8. Uncured adhesive can be cleaned from the board with IPA or Safewash Total.
9. Material removed from containers may be contaminated during use. Do not return product to the original container.

Storage:

- Product is required to store in the unopened container in a dry location.
- Optimal Storage: 2°C to 10°C. Storage below 2°C or greater than 10°C may affect product properties.

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