

# GL 168

## Electronics Epoxy

### Description

GL 168 is a one-part off white adhesive based on epoxy resins. It cures fast at elevated temperatures and has excellent adhesion to most pc boards and electronic components. It may be cured at 100°C or faster at 175°C. It has no sagging. It has a stable pot life and long shelf life even at room temperature of 25°C. It has been designed especially for bonding electronic components. It has relatively low viscosity for faster dispense from syringes. It has high thixotropic which can control the flow of the adhesive.

### Applications

1. Epoxy adhesive for attaching to ceramic, metals, and most plastics in electronics.

### Guidelines for Use

1. Thaw the epoxy to room temperature (25°C) before use.
2. Dispense the epoxy by using a syringe.
3. Wipe off any excess uncured adhesive with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue dabbed with isopropanol.alcohol (IPA).
4. Cure the epoxy by heating at 100°C for 120 minutes in a convection oven. Curing at lower temperature will require a longer time.

### Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		Off white paste
Mix ratio, by weight			One component
Shelf life, -20°C	Pen 26	Month	6
Pot life, 25°C	Pen 57	Week	1
Specific gravity	Pen 14		1.3
Viscosity, CAP 2000+ viscometer, 25°C Cap-06@100rpm	Pen 44	cps	45,000
Thixotropic Index	Pen 37	-	1.9
Hardness, cured 100°C for 2 hr	Pen 29	Shore D	90
Shear strength	Pen 36	kgcm <sup>-2</sup>	545
Water boil, wt gain, 100°C/1hr	Pen 21	%	<1.0
Tg, DSC, cured 100°C for 2 hr	Pen 19	°C	119
CTE, alpha-1	-	mm <sup>-1</sup> °C <sup>-1</sup>	6.8 x 10 <sup>-5</sup>
, alpha-2	-	mm <sup>-1</sup> °C <sup>-1</sup>	1.9 x 10 <sup>-4</sup>
Ionic Content, Cl	-	ppm	<50
, K	-	ppm	< 50
, Na	-	ppm	< 20

### Recommended Cure

T(°C)	Gel time	Cure time
100	12 min	2 hours
150	2 min	30 min

### Storage

Tightly close original container of unused product. Store below -20°C. Storing at lower temperatures down to -40°C may prolong shelf life beyond 6 months. However it may take longer time to thaw the product.

### Packaging

- 5 ml EFD syringe
- 10 ml EFD syringe
- 30 ml EFD syringe

### Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

### Contact Information

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