

# Epoxy Resin - PPC187

## Technical Data Sheet

### Description:



Epoxy resin PPC187 is a thermally conductive flame retardant potting and encapsulating compound. It has a long usable life and may be hot or cold cured. The system exhibits a good surface finish, high electrical strength, excellent thermal conductivity and low cure shrinkage. PPC187 is compatible with most circuit board components and materials over a wide temperature range. Adhesion is excellent to most plastics and substrates. The combination of properties and the ease of use of the material will lend itself to a wide range of applications. PPC187 does not contain heavy metals or halogens and therefore meets the requirements of WEEE and RoHS. PPC187 is available in bulk, kits and twin pack form. The standard colour is white but other colours are available on request.

### Features:

- Excellent thermal conductivity
- High electrical insulating characteristics
- Non-toxic
- Low shrinkage
- High adhesion
- Good chemical and water resistance



### Cure Schedule

Minimum Cure	Full Cure
24 hrs at 20°C	1 week
2 hrs at 60°C	6 hours
1 hrs at 80°C	4 hours

The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exothermic. Experimentation and testing is suggested to avoid side effects. For maximum properties a post cure may be required.

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### Typical Properties

Water absorption (7 days at 23°C)	0.46%
Shore D hardness	90
Flexural strength	90 - 100
Tensile strength (MPa)	60 - 70
Thermal conductivity	1.25 W/m. K
Co-efficient of thermal expansion	35 - 45 ppm
Operating temperature range	-40 to +150°C continuous service (Application and geometry dependent)
Volume resistivity	12 × E10 ohm.cm
Electric strength	12 kV/mm
Dielectric constant at 100 Hz	4.9
Dielectric constant at 1 kHz	4.7
Dielectric constant at 10 kHz	4.6

### Specifications

Property	Mixed
Colour	White
Specific gravity g/ml	2
Viscosity m.Pa.s at 25°C	10,000
Maximum ratio by weight	-
Maximum ratio by volume	-
Usable life - 150 g at 25°C	-
Gel time - 150 g at 25°C	-

### Part Number Table

Description	Part Number
Encapsulante, Epoxy, Thermal Cond, 250G	PPC187

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