

Polyurethane Resin



**RoHS
Compliant**

Description

This is a two-part, optically clear polyurethane resin formulated for potting and encapsulation. The cured resin system is semi-rigid and durable. This is suited to LED applications.

Typical Properties

Liquid Properties

Base Material	: Polyurethane
Density Part A - Resin	: 1.03g/ml
Density Part B - Hardener	: 1.12g/ml
Part A Viscosity	: 700mPa s @ 23°C
Part B Viscosity	: 1200mPa s @ 23°C
Mixed System Viscosity	: 900mPa s @ 23°C
Mix Ratio (Weight)	: 1.27 : 1
Mix Ratio (Volume)	: 1.44 : 1
Usable Life (20°C)	: 17 mins
Gel Time (23°C)	: 21 mins
Cure Time (23°C)	: 24 hours
Colour Part A - Resin	: Clear
Colour Part B - Hardener	: Clear
Shrinkage	: < 1%
Exotherm (Measured on 100ml sample in a Cylinder of diameter 49.4mm @ 23°C)	: < 90°C

Cured System

Thermal Conductivity	: 0.2W/m.K
Cured Density	: 1.08g/ml
Temperature Range	: -40°C to +120°C
Max Temperature Range (Short Term (°C)/30mins) (Application and Geometry Dependent)	: +130
Dielectric Strength	: 11kV/mm
Volume Resistivity	: 10 ¹⁴ Ω-cm
Shore Hardness @ 25°C	: A75
Colour (Mixed System)	: Colourless
Refractive Index	: 1.488
Flame Retardancy	: No
Permittivity @ 50 Hz	: 3.5
Water Absorption (9.7mm thick disk, 51mm diameter) 10 days @ 20°C/1 hour @ 100°C	: 0.7%/1.4%

General Properties

Packaging	: 250g Resin Pack
Shelf Life	: 12 months
Storage	: Dry Conditions: Above 15°C, Below 35°C
UL Approval	: Meets UL94 V-0



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Mixing

When in Resin pack form, the resin and hardener are mixed by removing the clip and moving the contents around inside the pack until thoroughly mixed. To remove the clip, remove both end caps, grip each end of the pack and pull apart gently. By using the removed clip, take special care to push unmixed material from the corners of the pack. Mixing normally takes from two to four minutes depending on the skill of the operator and the size of the pack. Both the resin and hardener are evacuated prior to packing so the system is ready for use immediately after mixing. The corner may be cut from the pack so that it may be used as a simple dispenser.

Part Number Table

Description	Part Number
Polyurethane Resin, Optically Clear, 250g, Pack	MC002570

