

Polyurethane Resin

Low Viscosity, Thermally Conductive



RoHS
Compliant

Description

This is a flame retardant polyurethane potting resin designed for applications where small and delicate components are involved. MC002228 exhibits very little stress and is highly resistant to thermal shock.

Typical Properties

Liquid Properties

Base Material	: Polyurethane
Density Part A - Resin	: 1.69g/ml
Density Part B - Hardener	: 1.23g/ml
Part A Viscosity	: 24000mPa s @ 23°C
Part B Viscosity	: 230mPa s @ 23°C
Mixed System Viscosity	: 4000mPa s @ 23°C
Mix Ratio (Weight)	: 5.52:1
Mix Ratio (Volume)	: 4.01:1
Usable Life (20°C)	: 20 mins
Gel Time (23°C)	: 50 mins
Cure Time (23°C)	: 24 hours
Cure Time (60 °C)	: 3 hours
Colour Part A - Resin	: Black
Colour Part B - Hardener	: Brown
Shrinkage	: < 1%
Exotherm (Measured on 100ml sample in a cylinder of diameter 49.4mm @ 23°C)	: < 35°C

Cured System

Thermal Conductivity	: 0.5W/m.K
Cured Density	: 1.6g/ml
Temperature Range	: -50°C to +120°C
Dielectric Strength	: 14kV/mm
Volume Resistivity	: 10 ¹⁴ Ω-cm
Shore Hardness	: A85
Colour (Mixed System)	: Black
Flame Retardancy	: Yes
Permittivity @ 50 Hz	: 5
Water Absorption (9.7mm thick disk, 51mm diameter) 10 days @ 20°C/1 hour @ 100°C	: <0.5%/1%

General Properties

Packaging	: 500g 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, Thermally Conductive, Black, 500g, Pack	MC002228

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