29/03/18 V1.0

Polyurethane Resin

Description

This is a two-part, room temperature curing polyurethane system designed for potting and encapsulation. The cured resin system exhibits a high degree of toughness. This is suited to applications with stringent temperature cycling.

Typical Properties

Liquid	Properties
Liquiu	i roperties

Base Material Density Part A - Resin Density Part B - Hardener Part A Viscosity Part B Viscosity Mixed System Viscosity Mix Ratio (Weight) Mix Ratio (Volume) Usable Life (20°C) Gel Time (23°C)	: Polyurethane : 1.65g/ml : 1.24g/ml : 20000mPa s @ 23°C : 50mPa s @ 23°C : 2000mPa s @ 23°C : 6.93:1 : 5.18:1 : 30 mins : 60 mins
Cure Time (23°C) Colour Part A - Resin Colour Part B - Hardener Shrinkage Exotherm (Measured on 100ml sample in a cylinder of diameter 49.4mm @ 20-25°C)	: 24 hours : White : Dark Amber : < 1% : < 35°C
Cured System	
Thermal Conductivity	: 0.45W/m.K

I nermal Conductivity	: 0.45W/m.K	
Cured Density	: 1.59g/ml	
Temperature Range	: -40°C to +100°C	
Dielectric Strength	: 18kV/mm	
Volume Resistivity	: 10 ¹⁴ Ω-cm	
Shore Hardness	: D50	
Colour (Mixed System)	: White	
Flame Retardancy	: Meets UL94 V-0	
Permittivity @ 50 Hz	: 3.9	
Comparative Tracking Index	: >600 Volts	
Water Absorption (9.7mm thick disk, 51mm diameter)		
10 days @ 20°C/1 hour @ 100°C	: <0.5%/1%	

General Properties

Packaging Shelf Life Storage UL Approval : 500g Resin Pack : 12 months : Dry Conditions: Above 15°C, Below 35°C : Meets UL94 V-0

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Polyurethane Resin



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, Tough White, 500g, Pack	MC002565

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