

Resin

Damival® 13552 OD50 / 13500 0000

- ▶ Self extinguishing polyurethane potting system
- ▶ UL94 V0 approved (E 108253)
- ▶ Qualified as low smoke emission acc. to NF16-101/102 railway standard
- ▶ RoHS compliant, Halogen Free
- ▶ Semi rigid type
- ▶ Good thermal conductivity
- ▶ White colour

General description

Two parts polyurethane potting resin.

Application

Casting resin for encapsulation of transformers, printed circuit board assemblies, inductive components ...

Processing

The resin must be stirred before use, as it contains fillers which may settle during storage. Avoid air introduction during stirring.

Polyurethane resin and hardener are sensitive to moisture during the processing steps (storage, mixing, casting). The parts to be casted should be dry and clean.

A preheating of the parts and/or of the resin may improve the encapsulation. A vacuum processing enhance the dielectrical and mechanical properties.

Mixing can be done by machine or manually.

The gel time and the curing time depend on the mixed volume, the temperature and the thickness of the layer.

Final properties are depending on the curing level.

Mixing ratio (resin/hardener):

Weight: 100 / 16

Volume: 100 / 20

Storage Conditions

Resin : 12 months in original packaging, at maximum 25°C, protected from moisture. Possible storage at higher temperature for short period of time. A storage above 25°C will increase the settling.

Hardener: 12 months in original packaging, at maximum 25°C, protected from moisture. Possible storage at higher temperature for short period of time. May crystallise below 5°C. In such case, warm up to 60°C until crystals disappear, and stir before use.

Packaging

Resin : 25 kg, 250 kg metallic drums,

Hardener : 5 kg, 25 kg, 250 kg metallic drums,

Other packaging upon request

		Value (Resin)	Value (Hardener)	Value (After mixing)	Value (After curing)	Test norm
Physical properties						
Colour		White	Brown	White		
Density at 25°C		1.54	1.21	1.50		
Viscosity at 25°C	mPa.s	9000 ± 3000	90 ± 20	4500		DIN 53019
Gel time at 20°C (1 000 g)	mn			70 ± 15		TECAM
Hardness Shore D					55-38 (0-15sec)	ISO 868
Water absorption (24 h at 25°C)	%				0.18	ISO 62
Oxygen index	%				38	
Smoke & Fire Rating					I3F1	NF16-101/102
Self extinguishing					V0 (6mm)	UL 94
Glow Wire Flammability Index	°C				950	IEC 60695-2-12
Glow Wire Ignition Temperature	°C				850	IEC 60695-2-13
Thermal properties						
Range of use					-40°C / +130°C	
Thermal conductivity	W/m.K				0.78	DIN EN 821-2
Glass transition temperature	°C				31 (DMA)	IEC 61006
Coefficient of thermal expansion	ppm/K				67 - 142	TMA
Thermal Index -10% weight loss limit					130°C - Class B	IEC 60216
Mechanical properties						
Tensile strength	MPa				6	ISO 527
Elongation	%				85	ISO 527
Electrical properties						
Dielectric strength (50% R.H./ 23°C)	kV/mm				20	
Comparative tracking index	V				>600	IEC 60112
Dielectric constant (50Hz/20°C)					4.2	
Dissipation factor (50 Hz/20°C)					0.01	

Health and safety

Avoid any contact with skin and eyes,
Work in a well ventilated area, ,
Wear safety gloves and goggles.

Read the Material Safety Data Sheet for complete information.

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