



Resina poliuretana Damival 13653

Damival® 13653 0090 / 13500 0000

- ▶ Flexible elastomeric compound
- ▶ Very hydrophobic grade
- ▶ Good adhesion
- ▶ Suitable for very low temperature
- ▶ Low and stable dielectric constant

General description

Two parts polyurethane casting resin.

Application

Casting resin for encapsulation of Printed Circuit Boards Assemblies, sensors, cable connexion...

Processing

The resin must be stirred before use, as it contains fillers which can 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 and hardener can 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 / 25

Volume: 100 / 22

Options

Damival 13653 0090 can be used with the hardener Damival 13400 OM00 to achieve a lower mix viscosity (1800 mPa.s) and a softer material (Shore A 65). Mixing ratio is unaffected.

Storage Conditions

Resin : 18 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 : 20kg metallic drums,

Hardener : 5 kg, 25 kg metallic drums,

Other packaging upon request

13653 0090 / 13500 00 00



		Value (Resin)	Value (Hardener)	Value (After mixing)	Value (After curing)	Test norm
Physical properties						
Colour		Black	Brown	Black		
Density at 25°C		1,09	1.21	1.11		
Viscosity at 25°C	mPa.s	6500 ± 1000	90 ± 20	3000		DIN 53019
Gel time at 20°C (1 000 g)	mn			70 ± 20		TECAM
Hardness Shore A					75	ISO 868
Mechanical properties						
Elongation	%				150	ISO 527
Electrical properties						
Dielectric strength (50% R.H./ 23°C)	kV/mm				16	IEC 60243
Dielectric constant (50Hz/20°C)					2.8	IEC 60250
Dissipation factor (50 Hz/20°C)					0.01	IEC 60250
Thermal properties						
Thermal class	10%				130°C 20 000h	IEC 60085
Glass transition temperature	°C				- 62	DMA
Thermal conductivity	W/m.K				0.24	DIN EN 821-2
Coefficient of thermal expansion	ppm/K				160	TMA
Range of use					- 70°C / + 130°C	

Health and safety

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

Read the Material Safety Data Sheet for complete information.

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