

Technical Data Sheet

Electronic & Engineering Materials

RanVar™ TR-308A Black Resin
RanVar™ TR-308B Hardener

Two-Component Epoxy Potting Compound

RanVar™ TR-308 Black Epoxy

Product Description

RanVar™ TR-308 Black Epoxy is a two-component, room temperature curing, 100%-solids epoxy resin system.

Areas of Application

Potting and sealing of electrical and electronic equipment

Features and Benefits

- Mineral-filled for high thermal conductivity
- Meets UL 94 V0
- Low shrinkage
- Semi-rigid

Application Methods

- Bench casting
- Meter-Mix

Transportation / Storage

Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material should be suitable for use stored under these conditions in the original sealed containers for twelve (12) months from the date of shipment.

Failure to store the product as recommended above may lead to deterioration in product performance.

Mineral filler may settle during storage. Mix individual components thoroughly before use.

Health / Safety

Refer to the Material Safety Data Sheet.

See ELANTAS PDG Technical Bulletin TI-100 - *Handling Precautions for Epoxy Resins.*

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		RanVar™ TR-308A Black Resin	RanVar™ TR-308B Hardener	
Color		Black	Amber	
Viscosity	25°C / 77°F	30,000 – 50,000	200 – 400	cP
Weight per Gallon	25°C / 77°F	14.2 – 14.5	7.85 – 8.05	pounds
Flash Point	ASTM D93	> 94 > 201	> 94 > 201	°C °F
Mix Ratio	Parts by weight Parts by volume	100 100	12 21.5	

Typical Properties of Mixed Materials

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	6,000 – 8,000	cP
Gel Time	25°C / 77°F – 200 mL	90 – 120	minutes

RanVar™ TR-308 Black Epoxy

Curing Schedule

Mix RanVar™ TR-308A Black Resin and RanVar™ TR-308B Hardener in the ratio specified above until homogeneous. Pot life of the mixture is less than 2 hours. Mix only as much as needed for the job at hand.

Mixture will harden within 24 hours at room temperature. Allow 3 - 5 days to develop full properties.

Alternatively, the mixture may be cured for 4 hours at 80°C / 176°F after it has gelled. Room temperature cure is recommended for minimal stress on components.

The cure schedules above are based on time after the unit reaches the specified temperature and are recommendations only. The user is responsible for determining the optimum cure conditions for his application.

Typical Mechanical Properties

Specimens cured 72 hours at 25°C / 77°F

Property	Test Method	Conditions	Value	Units
Shore Hardness	ASTM D2240	25°C / 77°F	D 65-70	
Tensile Strength	ASTM D638	25°C / 77°F	4,800	psi
Water Absorption	ASTM D570	24 hours @ 25°C / 77°F	0.1	%
Thermal Shock Resistance	MIL-I-16923	-55°C to + 130°C	pass 10	cycles

Typical Electrical Properties

Specimens cured 72 hours at 25°C / 77°F

Property	Test Method	Conditions	Value	Units
Volume Resistivity	ASTM D257	25°C / 77°C	1.6 x 10 ¹⁴	ohm-cm
Dielectric Constant	ASTM D150	1 kHz – 25°C / 77°F	4.4	
Dissipation Factor	ASTM D150	1 kHz – 25°C / 77°F	0.02	

The above properties are typical values and are not intended for specification use.

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