Product Information

Electric

EP-4623 Epoxy resin Hardener H17 black

FEATURES

- Semi-rigid
- Plasticizers and nonylphenol free
- Unfilled
- Fast curing
- High dielectric properties
- Good adhesion on plastic

COMPOSITION

- Part A: epoxy resin EP 4623
- Part B: hardener H17 black

Two-component epoxy casting system, fast curing even in the presence of high humidity. Semi-rigid, good dielectric properties and thermal shock resistance, excellent adhesion on plastic materials.

APPLICATIONS

- Designed for encapsulating of small transformers, electronic boards, capacitors, relays, coils, sensors, cable glands and electrical connections. Electrical and electronic components for industry in general.

TYPICAL PROPERTIES

Specifications writers: These values are not intended for use in preparing specifications. Please contact your local sales representative prior to writing specifications on this product.

Property	Unit	Value
Colour (Resin A/Hardener B)	visual	Straw yellow /Black
Density at 23°C (Resin A/Hardener B)	g/cm^3	1.10/1.03
Viscosity at 23°C (Resin A/Hardener B)	mPa.s	600/360
Colour (Mixture)	visual	Black
Density at 23°C (Mixture)	g/cm^3	1.08
Viscosity at 23°C (Mixture)	mPa.s	450
Mixing ratio	pbw	100 : 28
	pbv	100 : 30
Gel-time at 23°C (150g)	minutes	25
Gel-time at 23°C (thin layer)	minutes	75
Hardness	Shore D	35 D
Tensile strength	MPa	6.90
Deformation at break	%	190
Glass transition (DSC)	°C	<30
Thermal conductivity	W/mK	0.2
Water absorption 10 days @23°C	% by wt.	2 – 3
Dielectric strength (2mm)	kV/mm	>16
Dielectric loss factor	%	7 – 8
Dielectric constant		4 – 6
Volume resistivity	Ω cm	6*10^{10}

HOW TO USE

Measure by weight or volume Resin and Hardener. Stir thoroughly until mixing is complete. Mix under vacuum or in a metering-mixing machine to prevent air entrapment. Alternatively degas the mixture in a vacuum chamber after mixing. Epoxy resins can crystallize at low temperature. To bring them back to their original condition heating at 40°C-50°C avoiding local overheating, then cool to room temperature.

MIXING

The two components should be thoroughly mixed using a ratio of 100:28

by weight or 100:30 by volume, until a homogeneous mixture.

POTLIFE AND GELTIME

When the two components are thoroughly mixed in the right mixing ratio the reaction starts. The pot life, or usable time of the mixture, is normally the time required for an increase equal to twice the initial viscosity. Both Pot-life and Gel-time are depending on the mass and temperature: higher the mass faster the reaction. Higher the temperature faster the reaction.

CURING

The system polymerizes at room temperature but the following cycle is recommended:

24 hours at RT + 6 hours at 60°C

HANDLING PRECAUTIONS

The information for a correct and safe handling of the products are contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks for health and environment and for suitable protective devices to be adopted. Share the safety data sheets with all the staff involved in the use of the products.

PACKAGING

Resin is supplied in 5kg and 25kg containers, hardener in 5kg and 25kg containers.

USABLE LIFE - STORAGE

Resin and hardener must be stored in the original unopened containers at a temperature between +10°C and +35°C. Be sure to close the containers after use. Resin and hardener, if stored under certain conditions, have a shelf life of 24 months from the date of manufacture.

LIMITATIONS

This product is neither tested nor represented as suitable for food contact, skin contact or medical uses.

LIMITED WARRANTY

The information contained in this document is offered in good faith based on Chemix research and is believed to be accurate. However, as the conditions and methods of use of our products are beyond our control, this information should not be used as a substitute for the tests that customers must first perform to ensure that Chemix products are fully satisfactory for their specific applications. The warranty is only applicable to the values indicated in the Product Sales Specifications. The sole and exclusive compensation for products with values that are out of specification is limited to the replacement of the product or the refund of the purchase price.

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