

DELO-MONOPOX® MK096

Base

- modified epoxy resin
- one-component, heat-curing, solvent-free, unfilled

Use

- for the bonding and fixing of components
- fast reaching of initial strength
- can be processed well with standard equipment, e. g., by Camalot or Asymtek
- due to fast curing at low temperatures, the product is especially suitable for the use on temperature-sensitive substrates, e. g., foil materials
- the product is normally used in a temperature range of -40 °C to +150 °C; depending on the application, other limits may be more reasonable
- compliant with RoHS directive 2002/95/EC

Processing

- the adhesive is supplied ready for use; in case of cool storage, it must be ensured that the container is conditioned to room temperature before use
- the adhesive is normally applied by dispensing or stencil printing
- the adhesive can be optimally processed within the processing time (storage life at room temperature) as the flow properties and the viscosity remain unchanged
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations

Curing

- curing proceeds at temperatures between +120 and +160 °C
- increased temperatures shorten the curing process, lower temperatures extend it, and can change the properties of the cured product
- the minimal curing temperature is +100 °C
- the actual curing times at the respective temperatures are dependent on the heating time of the components, the heating time of the components must be added to the curing time of the adhesive
- the curing times of the adhesive at the curing temperatures recommended can be drawn from the technical data

Curing parameters

- initial shear strength in dependence of the curing time (FR4 / SMD resistors 2 x 1.3 mm)
- curing process shear strength
- 60 s +150 °C 25 N
- 120 s +150 °C 40 N
- 180 s +150 °C 60 N
- 300 s +150 °C 70 N

Technical data

Color	red
Density [g/cm³] at room temperature (approx. 23 °C)	1.1
Viscosity at 23°C, rheometer, PP40, crack 800µm, shear rate 20 1/s	pasty
Thixotropy index at 23°C, rheometer, PP20, 100µm crack, lower shear rate 1 1/s, upper shear rate 10 1/s	8
Curing time until final strength [min] at +120 °C	30
Curing time until final strength [min] at +140 °C	15
Tensile strength [MPa] according to DIN EN ISO 527 layer thickness: 1 mm	60
Elongation at tear [%] according to DIN EN ISO 527 layer thickness: 1 mm	2
Young's modulus [MPa] according to DIN EN ISO 527 layer thickness: 1 mm	3500
Shore hardness D according to DIN EN ISO 868	82
Glass transition temperature [°C] rheometer, curing: 20 min/+140 °C	97
Coefficient of linear expansion [ppm/K] in a temperature range of +30 to +90 °C	63
Coefficient of linear expansion [ppm/K] in a temperature range of +110 to +150 °C	175
Shrinkage [vol. %] DELO Standard 13	3.9
Weight loss during curing [%]	0.3
Water absorption [weight %] according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	0.2
Ion content Na+ [ppm] extraction	<10
Ion content K+ [ppm] extraction	<10
Ion content F- [ppm] extraction	<10
Storage life at room temperature (max. 25 °C) in unopened original container	4 weeks
Storage life at +5 °C in unopened original container	6 months

Instructions and advice

General

The data and information provided are based on tests performed under laboratory conditions. Reliable information about the behavior of the product under practical conditions and its suitability for a specific purpose cannot be concluded from this.

Many product properties are subject to temperature and may change permanently, especially at high temperatures.

It is the user's responsibility to test the suitability of the product for the intended purpose and temperature range of use by considering all specific requirements. Type and physical and chemical properties of the materials to be processed with the product, as well as all actual influences occurring during transport, storage, processing and use, may cause deviations in the behavior of the product compared to its behavior under laboratory conditions. All data provided are typical average values or uniquely determined parameters measured under laboratory conditions.

The data and information provided are, therefore, no guarantee for specific product properties or the suitability of the product for a specific purpose.

Instructions for use

The instructions for use of DELO-MONOPOX are available on: www.DELO.de. We will be pleased to send them to you on demand.

Occupational health and safety

see material safety data sheet

Specification

see quality assurance test report