

DELOMONOPOX® 6093

heat curing, casting resin

Base

- epoxy casting resin
- one-component, heat-curing, unfilled

Use

- for the casting, coating and fixing of components and assembly groups
- especially for the use in electronics
- good flow behavior
- the cured 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 2015/863/EU
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Processing

- to heat the components, increased temperatures can be used, as well
- the heating time of the components must be added to the actual curing time
- for curing, the inside of the adhesive layer must have the required temperature
- depending on the adhesive amount used, exothermic reaction heat is developed which can lead to overheating; in this case, the curing temperature must be reduced accordingly
- the adhesive is supplied ready for use and can be processed well from the original container or with DELO dispensing units
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations
- use DELOTHEN cleaners for the cleaning of bonding surfaces
- adhesion to the components can be improved by sand blasting, grinding or pickling

Curing

- curing proceeds at temperatures between +100 and +130 °C
- increased temperatures shorten the curing process, lower temperatures extend it, and can change the properties of the cured product

Technical data

Color black

Density [g/cm³] 1.2
DELO Standard 13
at room temperature (approx. 23 °C)

Viscosity [mPas] 40000
at 23 °C, Brookfield rpm 7/5

[mPas] 31000
at 23 °C, rheometer, shear rate 10 1/s

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Processing time at room temperature (max. 25 °C)	6 weeks
Curing time until final strength [min] at 130 °C in a convection oven	30
<i>Tensile shear strength Al/Al [MPa]</i> DIN EN 1465, sand-blasted component thickness: 1.6 mm after 30 min at +130 °C	14
Compression shear strength PETP/PETP [MPa] DELO Standard 5 after 30 min at +100 °C	20
Compression shear strength PS/PS [MPa] DELO Standard 5 after 30 min at +100 °C	26
Tensile strength [MPa] according to DIN EN ISO 527 layer thickness: 2 mm after 30 min at +130 °C	41
Elongation at tear [%] according to DIN EN ISO 527 layer thickness: 2 mm after 30 min at +130 °C	1.6
Young's modulus [MPa] according to DIN EN ISO 527 layer thickness: 2 mm after 30 min at +130 °C	2900
<i>Shore hardness D</i> according to DIN EN ISO 868 after 30 min at +100 °C	74
Decomposition temperature [°C] DELO Standard 36	300
Ball indentation hardness [MPa] ISO 2039, part 1	137
Glass transition temperature [°C] rheometer	93
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +25 to +140 °C	111
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +70 °C	59
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +110 to +160 °C	183
Shrinkage [vol. %] DELO Standard 13	1.1
Water absorption [weight %] according to DIN EN ISO 62 after 30 min at +100 °C	0.1
Specific volume resistance [Ωcm] VDE 0303, part 3, after 45 min at +130 °C	>1xE13
Surface resistance [Ω] VDE 0303, part 3, after 45 min at +130 °C	>1xE12

Dielectric strength [kV/mm] VDE 0303, part 2, after 45 min at +130 °C	18
Dielectric constant VDE 0303, part 4, after 45 min at +130 °C	3.9
Creep resistance CTI VDE 0303, part 1, IEC 112, after 45 min at +130 °C	100 M
Storage life at 0 °C to +10 °C in unopened original container	6 months
Performance under chemical influence compression shear strength after storage for 1,000 h based on initial value at room temperature measured at room temperature (approx. 23 °C) according to DELO Standard 5	

Chemical medium	Compression/shear strength Al/Al [%]
acetone	74
ethanol denatured	92
ethanol 70 % denatured	90
ATF gear oil	88
petrol	94
diesel fuel	107
engine oil 10W40	105
demineralised water / glykol mixture 50:50	71

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. It is the customer's responsibility to test the suitability of the product for the intended purpose 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. The data and information provided are therefore no guarantee for specific product properties or the suitability of the product for the intended purpose.

Nothing contained herein shall be construed to indicate the non-existence of any relevant patents or to constitute a permission, encouragement or recommendation to practice any development covered by any patents, without permission of the owner of this patent.

All products provided by DELO are subject to DELOs' General Terms of Business. Verbal side agreements are not permitted. This document is subject to change.

Instructions for use

The instructions for use of DELOMONOPOX 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

The properties in *italics* are part of the specification. Ranges with clear limits are defined for them and others, where applicable. In the course of the QA test, each batch is tested for these properties and the maintenance of the limits is ensured. The measuring methods used can deviate from those specified in the data sheet. Details can be found in the QA test report.