DELO

Technical Information

# DELOMONOPOX® MG063

heat curing, casting resin

## Base

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

## Use

- for the casting, coating and fixing of components and assembly groups
- especially for the use in electronics
- good tough-elastic properties
- for the bonding of temperature-resistant plastics
- the cured product is normally used in a temperature range of -40 °C to +160 °C; depending on the application, other limits may be more reasonable
- compliant with RoHS directive 2011/65/EU

## 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, in case of cooled storage, it must be ensured that the container is conditioned to room temperature before use
- the containers are conditioned at room temperature (max. +25 °C); the conditioning time is approx. 2 h for containers up to 310 ml; additional heat addition is not allowed
- the adhesive 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 +150 °C
- increased temperatures shorten the curing process, lower temperatures extend it, and can change the properties of the cured product
- fast induction curing is possible

## Technical data

| | |
|---|---|
| *Color* | black |
| Density [g/cm³]<br>DELO Standard 13<br>at room temperature (approx. 23 °C) | 1.2 |

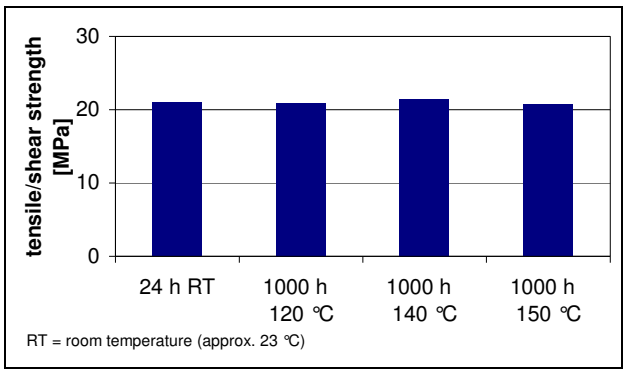
**DELO** Industrial Adhesives
DELO-Allee 1
86949 Windach · Germany
Phone +49 8193 9900-0
Fax +49 8193 9900-144
info@DELO.de · www.DELO.de

*Viscosity* [mPas] — 180000
at 23 °C, Brookfield rpm 7/5

Curing time until final strength [min] — 30
at 150 °C in an air convection oven

*Tensile shear strength Al/Al* [MPa] — 21
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
after 30 min at +150 °C

Tensile shear strength Al/Al
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
curing: 30 min at +150 °C




Temperature stability Al/Al at +150 °C [MPa] — 2.5
according to DIN EN 1465, sand-blasted
component thickness: 1.6 mm

Tensile strength [MPa] — 35
according to DIN EN ISO 527
layer thickness: 2 mm
after 30 min at +150 °C

Elongation at tear [%] — 1.0
according to DIN EN ISO 527
layer thickness: 2 mm
after 30 min at +150 °C

Young's modulus [MPa] — 3000
according to DIN EN ISO 527
layer thickness: 2 mm
after 30 min at +150 °C

Shore hardness D — 80
according to DIN EN ISO 868
after 30 min at +150 °C

Decomposition temperature [°C] — 260
DELO Standard 36

Glass transition temperature [°C] — 113
rheometer

Coefficient of linear expansion [ppm/K] — 71
in a temperature range of +30 to +80 °C

Coefficient of linear expansion [ppm/K] — 188
in a temperature range of +100 to +160 °C

Water absorption [weight %] — 0.2
according to DIN EN ISO 62
after 30 min at +150 °C

| | |
|---|---|
| Ion content Na+ [ppm]<br>extraction | <10 |
| Ion content K+ [ppm]<br>extraction | <10 |
| Ion content Cl- [ppm]<br>extraction | <10 |
| Ion content F- [ppm]<br>extraction | <10 |
| Specific volume resistance [Ωcm]<br>VDE 0303, part 3 | >1xE13 |
| Surface resistance [Ω]<br>VDE 0303, part 3 | >1xE12 |
| Dielectric strength [kV/mm]<br>VDE 0303, part 2 | 21 |
| Dielectric constant<br>VDE 0303, part 4 | 4.3 |
| Creep resistance CTI<br>VDE 0303, part 1, IEC 112 | 200 M |
| Storage life at room temperature (max. 25 °C)<br>in unopened original container | 4 weeks |
| Storage life at 0 °C to +10 °C<br>in unopened original container | 6 months |

Performance under chemical influence
compression shear strength after storage for 1,000 h
based on initial valve at room temperature
measured at room temperature (approx. 23 °C)
according to DELO Standard 5

| Chemical medium | Compression/shear strength Al/Al [%] |
|---|---|
| acetone | 101 |
| ethanol denatured | 92 |
| ethanol 70 % denatured | 76 |
| ATF gear oil | 71 |
| petrol | 81 |
| diesel fuel | 84 |
| engine oill 10W40 | 83 |
| demineralised water / glykol mixture 50:50 | 78 |
| demineralised water | 81 |
| NaOH 5% | 62 |

## 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. Verbal ancillary agreements are deemed not to exist.

### 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.