DELO

Technical Information

DELOMONOPOX® 1197

heat curing, construction adhesive

Base

- epoxy resin, construction adhesive
- one-component, heat-curing, filled

Use

- for the bonding of all metal types, temperature-resistant plastic, ferrite and ceramic
- especially for high-strength, tough-hard bondings with very high static and dynamic loading capacity, even at increased temperatures
- for bondings requiring a high run resistance
- the cured product is normally used in a temperature range of -55 °C to +200 °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 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 +130 and +180 °C
- increased temperatures shorten the curing process, lower temperatures extend it, and can change the properties of the cured product

Technical data

Color	silver grey
Filler	aluminum
Density [g/cm³] at room temperature (approx. 23 °C)	1.4
Viscosity [mPas] at 23 °C, Brookfield rpm 7/5	pasty
Processing time at room temperature (max. 25 °C)	6 weeks

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

Curing time until final strength [min] 75
at 130°C in a convection oven

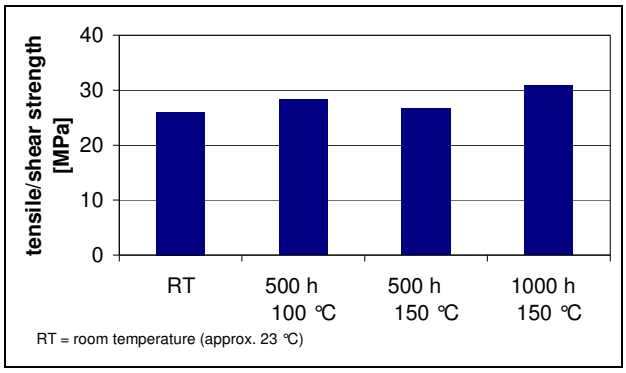
Curing time until final strength [min] 40
at 150 °C in an air convection oven

Curing time until final strength [min] 15
at 180 °C in an air convection oven

Tensile shear strength Al/Al [MPa] 26
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
after 40 min at +150 °C

Tensile shear strength Al/Al [MPa] 55
DELO Standard 39, sand-blasted
component thickness: 6 mm
after 40 min at +150 °C

Tensile shear strength Al/Al
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
curing: 40 min at +150 °C



Floating roller peel resistance St/St [N/mm] 12
DELO Standard 38, sand-blasted
component thickness: 1.5 mm

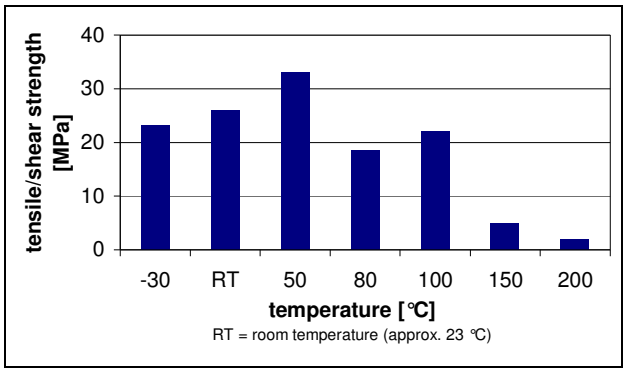
Temperature stability Al/Al at +50 °C [MPa] 33
according to DIN EN 1465, sand-blasted
component thickness: 1.6 mmm

Temperature stability Al/Al at +100 °C [MPa] 22
according to DIN EN 1465, sand-blasted
component thickness: 1.6 mm

Temperature stability Al/Al at +150 °C [MPa] 5
according to DIN EN 1465, sand-blasted
component thickness: 1.6 mm

Temperature stability Al/Al

according to DIN EN 1465, sand-blasted
component thickness: 1.6 mm
curing: 40 min at +150 °C



Tensile strength [MPa] according to DIN EN ISO 527 layer thickness: 2 mm after 40 min at +150 °C	40
Elongation at tear [%] according to DIN EN ISO 527 layer thickness: 2 mm after 40 min at +150 °C	1.4
Young's modulus [MPa] according to DIN EN ISO 527 layer thickness: 2 mm after 40 min at +150 °C	3300
Shore hardness D according to DIN EN ISO 868 after 40 min at +150 °C	67
Decomposition temperature [°C] DELO Standard 36	280
Ball indentation hardness [MPa] ISO 2039, part 1	95
Glass transition temperature [°C] rheometer	140
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +25 to +140 °C	93
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +90 °C	65
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +130 to +150 °C	171
Shrinkage [vol. %] DELO Standard 13	3.0
Water absorption [weight %] according to DIN EN ISO 62 after 40 min at +150 °C	0.1
Specific volume resistance [Ωcm] VDE 0303, part 3, after 40 min at +150 °C	>1xE13
Surface resistance [Ω] VDE 0303, part 3, after 40 min at +150 °C	>1xE12

Dielectric strength [kV/mm] 2
VDE 0303, part 2, after 40 min at +150 °C

Dielectric constant 3.6
VDE 0303, part 4, after 40 min at +150 °C

Creep resistance CTI 125 M
VDE 0303, part 1, IEC 112, after 40 min at +150 °C

Storage life at 0 °C to +10 °C 6 months
in unopened original container

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	62
ethanol denatured	96
ethanol 70 % denatured	79
ATF gear oil	94
petrol	90
diesel fuel	101
engine oill 10W40	93
acetic acid 10 %	56
demineralised water / glykol mixture 50:50	85
demineralised water	75
NaOH 5%	73

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.