

DELOMONOPOX® AD295

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
- good flow behavior
- excellent chemical resistance
- very high temperature stability
- the cured product is normally used in a temperature range of -40 °C to +200 °C; depending on the application, other limits may be more reasonable
- meets the requirements of the thermal vacuum outgassing test for the screening of space materials according to ECSS Q-70-02
- successfully tested according to UL 94 HB (by an independent test institute)
- 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. 1 h for containers up to 50 ml and 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
- when processing the adhesive with dispensing units, filler materials contained can have an abrasive effect on the systems used

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
- fast induction curing is possible

Technical data

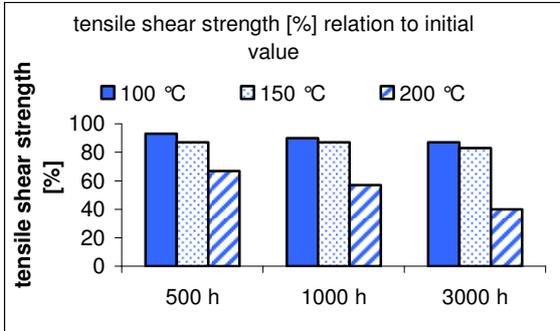
<i>Color</i>	light beige
Filler	minerals
Density [g/cm ³] DELO Standard 13 at room temperature (approx. 23 °C)	1.6
<i>Viscosity</i> [mPas] at 23 °C, Brookfield rpm 7/5	230000
Processing time at room temperature (max. 25 °C)	4 weeks
Processing time at +36 °C	4 days
Curing time until final strength [min] at 150 °C in an air convection oven	40
<i>Tensile shear strength Al/Al</i> [MPa] DIN EN 1465, sand-blasted component thickness: 1.6 mm after 40 min at +150 °C	30
Floating roller peel resistance St/St [N/mm] DELO Standard 38, sand-blasted component thickness: 1.5 mm	10
Temperature stability Al/Al at +100 °C [MPa] according to DIN EN 1465, sand-blasted component thickness: 1.6 mm	26
Temperature stability Al/Al at +150 °C [MPa] according to DIN EN 1465, sand-blasted component thickness: 1.6 mm	9
Temperature stability Al/Al at +200 °C [MPa] according to DIN EN 1465, sand-blasted component thickness: 1.6 mm	3
Tensile strength [MPa] according to DIN EN ISO 527 layer thickness: 2 mm after 40 min at +150 °C	50
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	5500
Shore hardness D according to DIN EN ISO 868 after 40 min at +150 °C	84
Decomposition temperature [°C] DELO Standard 36	300
Glass transition temperature [°C] rheometer	134
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +90 °C	42

Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +130 to +180 °C	147
Shrinkage [vol. %] DELO Standard 13	2.5
Water absorption [weight %] according to DIN EN ISO 62 after 40 min at +150 °C	0.12
Specific volume resistance [Ωcm] VDE 0303, part 3	>1xE13
Surface resistance [Ω] VDE 0303, part 3	>1xE13
Dielectric strength [kV/mm] DIN IEC 60243-1 at 50 Hz	20
Storage life at room temperature (max. 25 °C) in unopened original container	4 weeks
Storage life at 0 °C to +10 °C in unopened original container	6 months

Temperature resistance

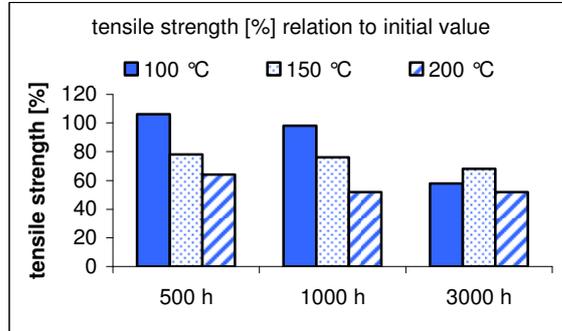
Tensile shear strength Al/Al

after thermal ageing
by the criteria of DIN EN 1465, sand-blasted,
component thickness 1.6 mm, gap 0.2 mm
curing: 40 min at +150 °C
measured at room temperature (approx. 23 °C)



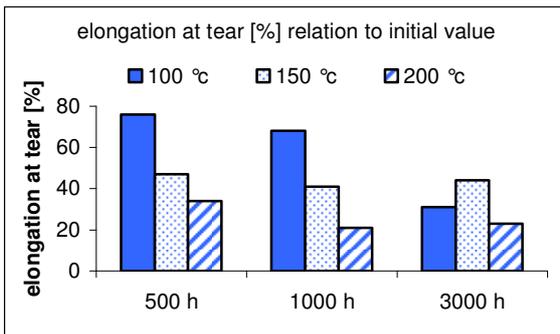
Tensile strength

after thermal ageing
by the criteria of DIN EN ISO 527
layer thickness: 2 mm
curing: 40 min at +150 °C
measured at room temperature (approx. 23 °C)



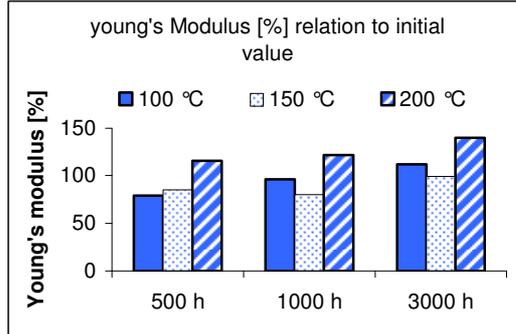
Elongation at tear

after thermal ageing
by the criteria of DIN EN ISO 527
layer thickness: 2 mm
curing: 40 min at +150 °C
measured at room temperature (approx. 23 °C)



Young's Modulus

after thermal ageing
by the criteria of DIN EN ISO 527
layer thickness: 2 mm
curing: 40 min at +150 °C
measured at room temperature (approx. 23 °C)



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.