DELO

Technical Information

DELO-DUOPOX® AD895

Multi-purpose 2c epoxy resin, cures at room temperature, medium-viscous, filled

Base

- epoxy resin
- two-component
- product is free of nonylphenol

Use

- high-strength construction adhesive
- multi-purpose
- the cured product is normally used in a temperature range of -40 °C to +140 °C; depending on the application, other limits may be more reasonable
- tested for biocompatibility and meets the requirements according to ISO 10993-5: test for cytotoxicity
- compliant with RoHS directive 2011/65/EU
- successfully tested according to UL 94 HB

Processing

- components A and B must be mixed well or homogenized in the mixing ratio stated below
- supplied ready for use and can be processed well from the original container
- using the DELO-AUTOMIX system for processing is especially advantageous, see selection chart "DELO-AUTOMIX system"
- 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

Curing

- proceeds at room temperature (approx. 23 °C)
- increased temperatures accelerate curing
- applying heat could change physical characteristics

Technical data

Color	grey
Filler	minerals
Mixing ratio (A : B) according to weight (A : B) according to volume	 7 : 3 2 : 1
Density of component A [g/cm³] DELO Standard 13 at room temperature (approx. 23 °C)	1.37

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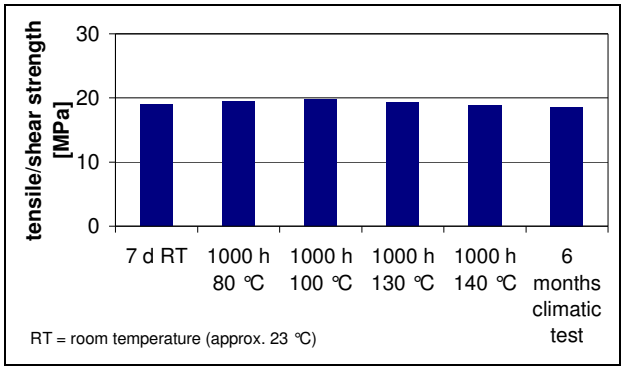
Density of component B [g/cm³] DELO Standard 13 at room temperature (approx. 23 °C)	1.19
Viscosity of component A [mPas] Brookfield at 23 °C	100000
Viscosity of component B [mPas] Brookfield at 23 °C	95000
Processing time in 100 g preparation [min] at room temperature (approx. 23 °C)	30
Maximal reaction temperature [°C] in 100 g preparation	98
Curing time until firmness to touch [h] tensile shear strength 1 - 2 MPa at room temperature (approx. 23 °C)	5.5
Curing time until functional strength [h] tensile shear strength > 10 MPa at room temperature (approx. 23 °C)	8
Curing time until final strength [h] at room temperature (approx. 23 °C)	24
Tensile shear strength Al/Al [MPa] DIN EN 1465, sand-blasted component thickness: 1.6 mm curing: 7 d at room temperature (approx. 23 °C)	19

Tensile shear strength Al/Al
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
curing: 7 d at room temperature (approx. 23 °C)

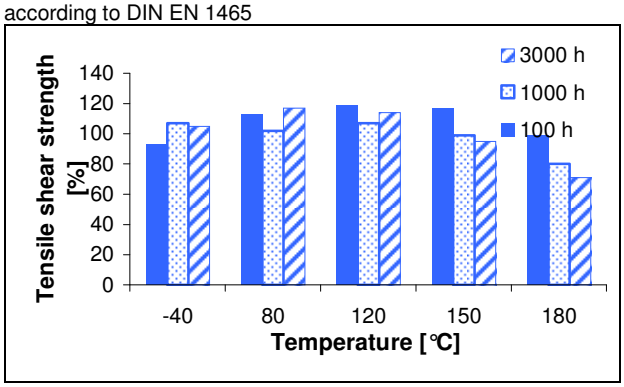


Tensile shear strength Al/Al [MPa] DELO Standard 39, sand-blasted component thickness: 6 mm curing: 7 d at room temperature (approx. 23 °C)	32
Floating roller peel resistance St/St [N/mm] DELO Standard 38, St/St sand-blasted component thickness: 1.6 mm and 0.5 mm	1.2
Tensile strength [MPa] DIN EN ISO 527	40
Elongation at tear [%] DIN EN ISO 527	2
Young's modulus [MPa] DIN EN ISO 527	2400

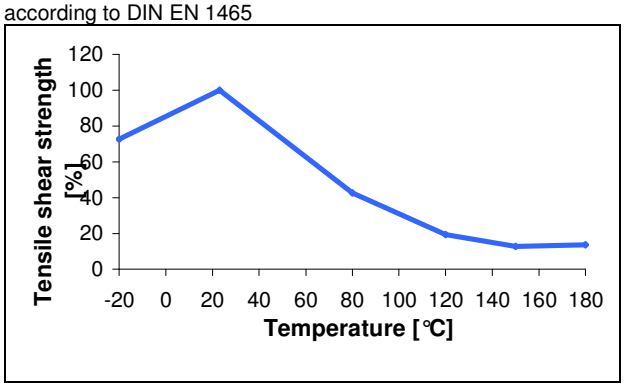
Shore hardness D DIN 53505	73
Glass transition temperature [°C] Rheometer, 2nd heating process	66
Decomposition temperature [°C] DELO Standard 36	200
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +50 °C	88
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +70 to +150 °C	178
Water absorption [weight %] DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	0.25
Specific volume resistance [Ωcm] VDE 0303, part 30	>1xE13
Surface resistance [Ω] VDE 0303, part 30	>1xE13
Dielectric strength [kV/mm] DIN IEC 60243-1 at 50 Hz	13.7
Dielectric constant RF-IV method, 1 MHz	4.0
Dielectric constant RF-IV method, 10 MHz	4.0
Dielectric constant RF-IV method, 100 MHz	3.9
Dielectric constant RF-IV method, 1 GHz	3.7
Creep resistance CTI VDE 0303, part 11, DIN EN 60112	600 M
Shrinkage [vol. %] DELO Standard 13	3.6
Storage life at room temperature (max. 25 °C) in unopened original container (volume per component < 1l)	12 months
Storage life at room temperature (max. 25 °C) in unopened original container (volume per component >= 1l)	6 months

Performance under temperature influence

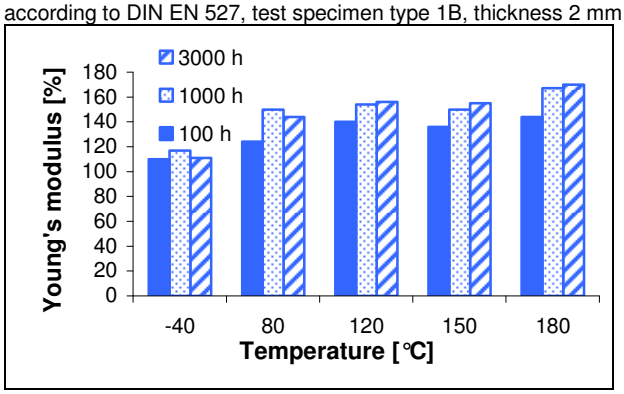
tensile shear strength Al/Al sand-blasted after temperature storage
based on initial value at room temperature
measured at room temperature (approx. 23 °C)
according to DIN EN 1465



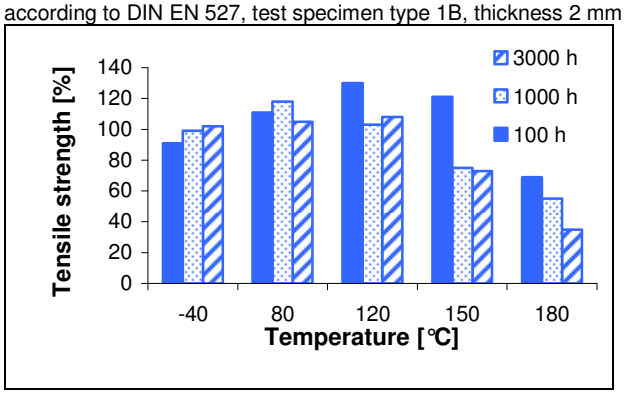
tensile shear strength Al/Al sand-blasted at temperature
based on initial value at room temperature
measured at determined temperature
according to DIN EN 1465



Young´s modulus after temperature storage
based on initial value at room temperature
measured at room temperature (approx. 23 °C)
according to DIN EN 527, test specimen type 1B, thickness 2 mm



tensile strength after temperature storage
based on initial value at room temperature
measured at room temperature (approx. 23 °C)
according to DIN EN 527, test specimen type 1B, thickness 2 mm



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 [%]
ethanol denatured	124
ethanol 70 % denatured	103
ATF gear oil	137
petrol	107
Diesel fuel	140
engine oill 10W40	136
acetic acid 10 %	73
demineralised water / glykol mixture 50:50	129
demineralised water	121

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 DELO-DUOPOX 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.