

DELO-DUOPOX® AD894

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

Base

- epoxy resin
- two-component

Use

- high-strength construction adhesive
- multi-purpose
- good flowing behavior
- also suitable for small castings
- 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
- compliant with RoHS directive 2015/863/EU

Processing

- sedimentation of the filler is possible, therefore, if container volume is > 250 ml per component please homogenize single components before use
- components A and B must be mixed homogeneously in the mixing ratio stated below
- using the DELO-AUTOMIX system for processing is especially advantageous
- 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

| | |
|--|----------|
| <i>Color</i> | black |
| Filler | minerals |
| Mixing ratio (A : B) according to weight | 7 : 3 |
| (A : B) according to volume | 2 : 1 |
| Density of component A [g/cm ³] DELO Standard 13 at room temperature (approx. 23 °C) | 1.37 |
| Density of component B [g/cm ³] DELO Standard 13 at room temperature (approx. 23 °C) | 1.18 |

| | |
|--|--------|
| Viscosity of component A [mPas] at 23 °C, rheometer | 40000 |
| Viscosity of component B [mPas] at 23 °C, rheometer | 30000 |
| Processing time in 100 g preparation [min] at room temperature (approx. 23 °C) | 45 |
| Maximum reaction temperature [°C] in 100 g preparation | 98 |
| Curing time until initial strength [h] tensile shear strength 1 - 2 MPa at room temperature (approx. 23 °C) | 5 |
| Curing time until functional strength [h] tensile shear strength > 10 MPa at room temperature (approx. 23 °C) | 7 |
| Curing time until final strength [h] at room temperature (approx. 23 °C) | 24 |
| Tensile shear strength Al/Al [MPa] by the criteria of DIN EN 1465, sand-blasted component thickness 1.6 mm, gap 0.1 mm curing: 7 d at room temperature (approx. 23 °C) | 19 |
| Tensile shear strength Al/Al [MPa] DELO Standard 39, sand-blasted component thickness: 6 mm curing: 7 d at room temperature (approx. 23 °C) | 31 |
| Floating roller peel resistance St/St [N/mm] DELO Standard 38, St/St sand-blasted component thickness: 1.6 mm and 0.5 mm | 0.7 |
| Tensile strength [MPa] according to DIN EN ISO 527 | 41 |
| Elongation at tear [%] according to DIN EN ISO 527 | 2.1 |
| Young's modulus [MPa] according to DIN EN ISO 527 | 2300 |
| Shore hardness D according to DIN EN ISO 868 | 73 |
| Decomposition temperature [°C] DELO Standard 36 | 215 |
| Glass transition temperature [°C] Rheometer, 2nd heating process | 63 |
| Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +50 °C | 91 |
| Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +70 to +150 °C | 178 |
| Shrinkage [vol. %] DELO Standard 13 | 4 |
| Water absorption [weight %] according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C) | 0.3 |
| 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

14

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

Storage life at room temperature (approx. 23 °C)

in unopened original container (volume per component < 1l)

6 months

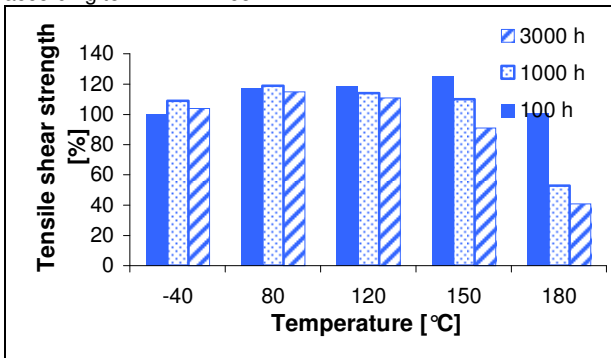
Storage life at room temperature (approx. 23 °C)

in unopened original container (volume per component >= 1l)

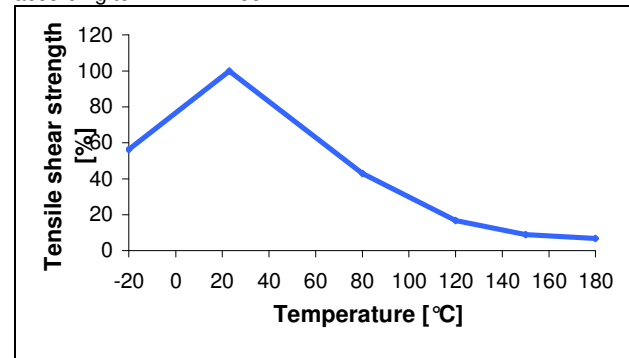
6 months

Performance under temperature influence

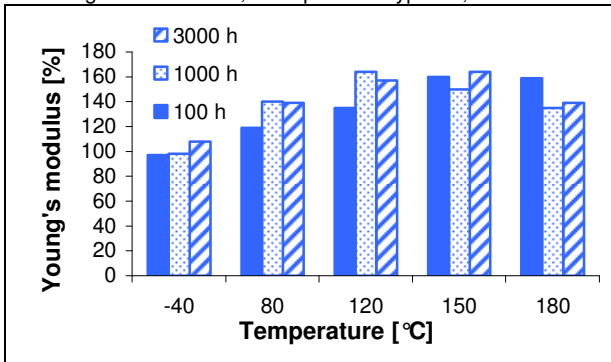
tensile shear strength Al/Al sand-blasted after temperature storage based on initial value at room temperature measured at room temperature (approx. 23 °C) according to DIN EN 1465



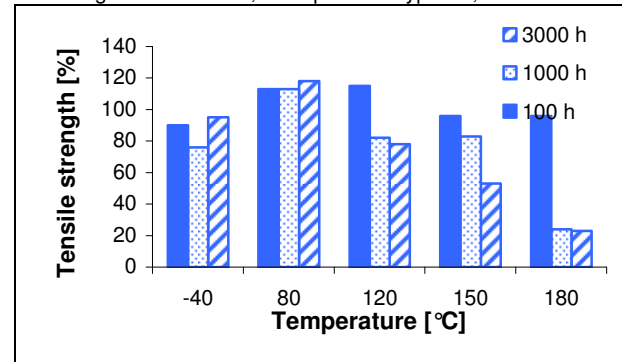
tensile shear strength Al/Al sand-blasted at temperature based on initial value at room temperature measured at determined temperature according to DIN EN 1465



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 value at room temperature
measured at room temperature (approx. 23 °C)
according to DELO Standard 5

| Chemical medium | Compression/shear strength AI/AI [%] |
|--|--------------------------------------|
| ethanol denatured | 82 |
| ethanol 70 % denatured | 93 |
| ATF gear oil | 96 |
| petrol | 98 |
| Diesel fuel | 82 |
| engine oil 10W40 | 69 |
| acetic acid 10 % | 110 |
| demineralised water / glykol mixture 50:50 | 130 |
| demineralised water | 106 |

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 a product for the intended purpose by considering all specific requirements and by applying standards the customer deems suitable (e. g. DIN 2304-1). Type, 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.

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 DELO's General Terms of Business. 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.