

DELO-DUOPOX® AB8162

Multi-purpose 2C epoxy resin, cures at room temperature, initial strength is reached very fast

Base

- epoxy resin
- two-component, thixotropic

Use

- high-strength construction adhesive
- multi-purpose
- the product was developed for the use in the aircraft interior sector
- optimized for accelerated curing (e. g. at + 60 °C)
- flame-retardant (standalone): meets the requirements of the FST test according to
 - a) CS/FAR Part 25 §25.853(a)(1)(ii) Amdt. 15/ Amdt.25-116 & ABD0031 (Resistance of Material to Flame, 12s Vertical Bunsen Burner Test);
 - b) CS/FAR Part 25 §25.853(d) Amdt. 15/ Amdt. 25-116 & ABD0031 (Specific Optical Density of Smoke);
 - c) ABD0031 (Toxic Components on Combustion Products)
- compliant with RoHS directive 2015/863/EU

Processing

- supplied ready for use and can be processed well from the original container
- 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

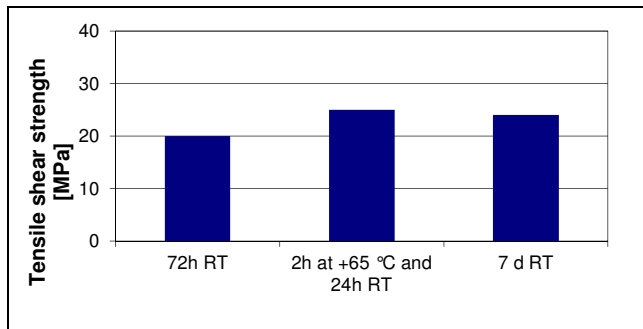
Technical data

<i>Color</i>	beige/ yellowish
<i>Filler</i>	inorganic filler
Mixing ratio (A : B) according to weight	2.12 : 1
(A : B) according to volume	2 : 1
Density of component A [g/cm³] at room temperature (approx. 23 °C)	1.27

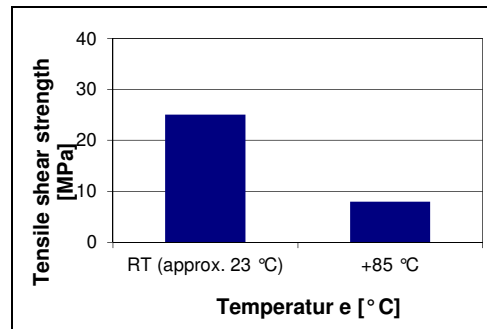
Density of component B [g/cm ³] at room temperature (approx. 23 °C)	1.21
<i>Viscosity of component A</i> [mPas] at room temperature (approx. 23 °C), Rheometer	120000
<i>Viscosity of component B</i> [mPas] at room temperature (approx. 23 °C), Rheometer	30000
Processing time in 20 g preparation [min] DELO standard 51, at room temperature (approx. 23 °C)	18
Processing time in 50 g preparation [min] DELO standard 52, at room temperature (approx. 23 °C)	10
Curing time until initial strength [h] tensile shear strength 1 - 2 MPa at room temperature (approx. 23 °C)	2.25
Curing time until functional strength [h] tensile shear strength > 10 MPa at room temperature (approx. 23 °C)	3.5
Curing time until final strength [d] at room temperature (approx. 23 °C)	7
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)	24
<i>Tensile shear strength Al/Al</i> [MPa] DIN EN 1465, sand-blasted component thickness: 1.6 mm curing: 2h at 60°C + 24h at room temperature (approx. 23 °C)	25

Tensile shear strength Al/Al

curing at determined temperature
measured at room temperature (approx. 23 °C)
DIN EN 1465, sand blasted



Curing: 2h at +65 °C + 24 h at RT (approx.. 23 °C)
measured at determined temperature
DIN EN 1465, sand blasted



Floating roller peel resistance St/St [N/mm]

DELO Standard 38, sand-blasted
component thickness: 1.5 mm and 0.5 mm
adhesive layer thickness: 0.1 mm
curing: 7 d room temperature (approx. 23 °C)

6

Floating roller peel resistance Al/Al [N/mm]

DIN EN 2243-2, sand-blasted
join part thickness: 1.5 mm and 0.5 mm
adhesive layer thickness: 0.1 mm
Curing: 7d at room temperature (approx. 23 °C)

3.5

Temperature stability Al/Al at +85 °C [MPa] DIN EN 1465, sand-blasted component thickness: 1.6 mm curing: 7d at room temperature (approx. 23 °C)	6
Temperature stability Al/Al at +85 °C [MPa] DIN EN 1465, sand-blasted component thickness: 1.6 mm curing: 2h at 60°C + 24h at room temperature (approx. 23 °C)	8
Compression shear strength Al/Al [MPa] DELO standard 5, sand-blasted Curing: 7d room temperature (approx. 23 °C)	40
Compression shear strength Al/Al [MPa] DELO standard 5, blank Curing: 7d at room temperature (approx. 23 °C)	14
Compression shear strength PA6/PA6 [MPa] DELO Standard 5 curing: 7 d at room temperature (approx. 23 °C)	20
Tensile strength [MPa] DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	36
Elongation at tear [%] DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	2
Young's modulus [MPa] DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	3200
Shore hardness D according to DIN EN ISO 868 curing: 7d at room temperature (approx. 23 °C)	77
Glass transition temperature [°C] DELO-Norm 24, DMTA, 2nd heating process	117
Shrinkage [vol. %] Curing: 7d room temperature	3
Water absorption [weight %] DIN EN ISO 62 Curing: 7d at room temperature (approx. 23 °C)	0.13
Decomposition temperature [°C] DELO Standard 38 curing: 7 d room temperature (approx. 23 °C)	264

Flammability tests

Test institute: Airbus Fire Test Laboratory, Bremen (DOA Approval No. EASA. 21J.031)

- Meets requirements of CS/FAR Part 25 §25.853(a)(1)(ii) Amdt. 15/Amdt. 25-116 & ABD0031
- Test standard: Fire Testing Handbook DOT/FAA/AR-00/12, Chapter 1: Determination of the Resistance of Material to Flame, 12 s Vertical Bunsen Burner Test & AITM 2-0002 B, Issue 3
- Meets requirements of CS/FAR Part 25 §25.853(d) Amdt. 15/Amdt. 25-116 & ABD0031
- Test standard: Fire Testing Handbook DOT/FAA/AR-00/12, Chapter 6 Determination of the Specific Optical Density of Smoke & AITM 2-0007, Issue 3, Flaming mode
- Meets requirements of ABD0031;
- Test standard: AITM 3-0005, Issue 2, Flaming mode, Determination of the Toxic Components on Combustion Products

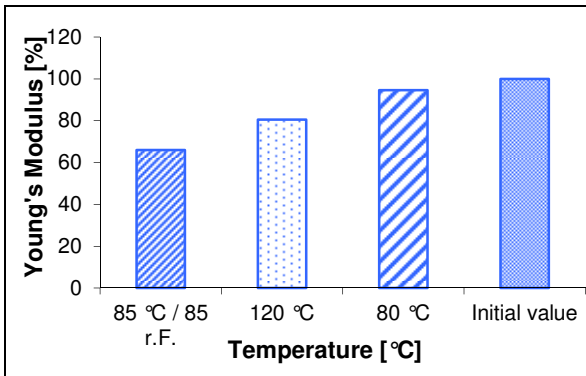
	HCN Hydrogen Cyanide [ppm]	CO Carbon Monoxide [ppm]	NOx Nitrous Gases [ppm]	SO2 Sulfur Dioxide [ppm]	HF Hydrogen Fluoride [ppm]	HCl Hydrogen Chloride [ppm]
DELO- DUOPOX AB8162	5	125	19	2	0	0
Airbus-Limit	150	1000	100	100	100	150

Storage life at room temperature (approx. 23 °C)
in unopened original container

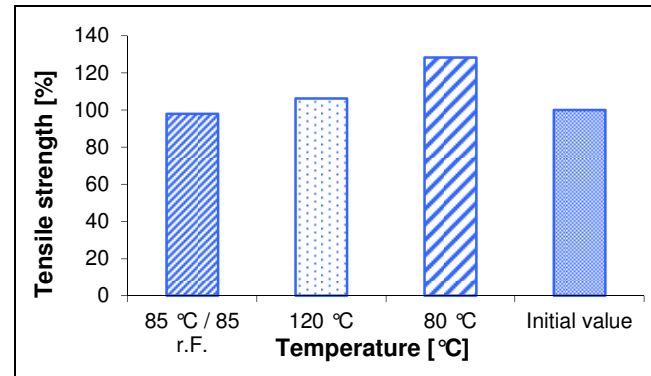
9 months

Performance under chemical influence

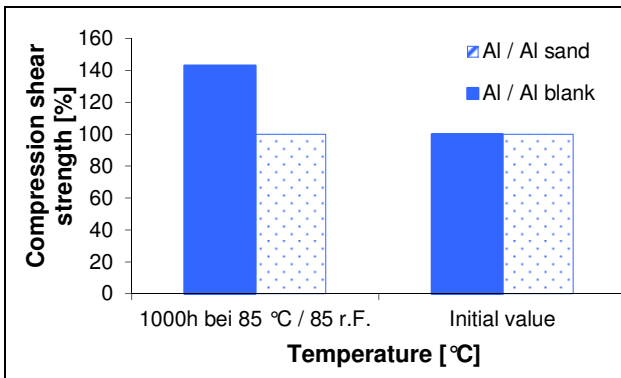
Young's Modulus after 1000 h temperature storage based on initial value at room temperature (approx. 23 °C), measured at room temperature according to DIN EN ISO 527



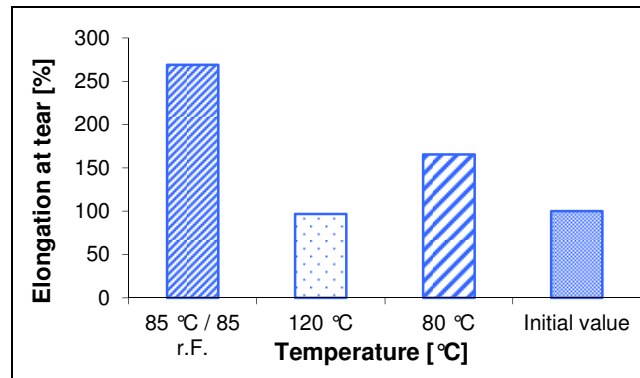
Tensile strength after 1000 h temperature storage based on initial value at room temperature (approx. 23 °C), measured at room temperature according to DIN EN ISO 527



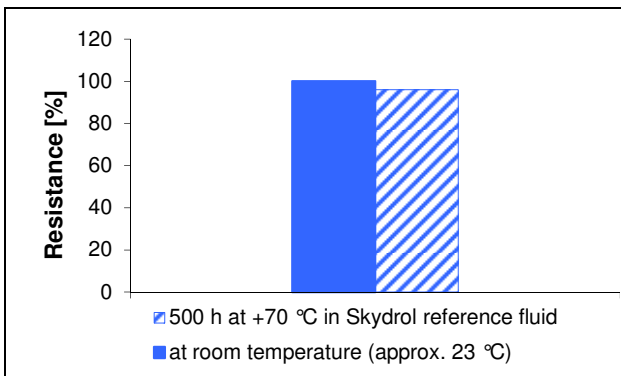
Compression shear strength after 1000 h temperature storage based on initial value at room temperature (approx. 23 °C), measured at room temperature according to DELO-Norm 5



Elongation at tear after 1000 h temperature storage based on initial value at room temperature (approx. 23 °C), measured at room temperature according to DIN EN ISO 527



Resistance in Skydrol reference fluid (Tri-n-butyl-phosphate), 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. 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.