

DELO-DUOPOX® SJ8665

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

Base

- epoxy resin
- two-component

Use

- high-strength construction adhesive
- multi-purpose
- in applications with elevated temperature stress
- in mechanical engineering, car manufacturing and tool construction
- in electrical engineering and electronics
- the cured product is normally used in a temperature range of -40 °C to +180 °C; depending on the application, other limits may be more reasonable

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 (e. g. +60 °C to +120 °C) accelerate curing
- applying heat could change physical characteristics

Technical data

<i>Color</i>	black
Filler	minerals
Mixing ratio (A : B) according to volume	2 : 1
(A : B) according to weight	1.65 : 1
Density of component A [g/cm ³] DIN 66137-2, measured with helium pycnometer at room temperature (approx. 23 °C)	1.16
Density of component B [g/cm ³] DIN 66137-2, measured with helium pycnometer at room temperature (approx. 23 °C)	1.41

Viscosity of component A [mPas] 250000
at 23 °C, rheometer (Paar)
gap 500 µm, shear rate 2/s

Viscosity of component B [mPas] 40000
at 23 °C, rheometer (Paar)
gap 500 µm, shear rate 2/s

Maximal reaction temperature [°C] 166
in 100 g preparation

Processing time in 20 g preparation [min] 15
at room temperature (approx. 23 °C)

Processing time in 100 g preparation [min] 40
at room temperature (approx. 23 °C)

Curing time until initial strength [h] 3.5
tensile shear strength 1 - 2 MPa
at room temperature (approx. 23 °C)

Curing time until initial strength [min] < 5
tensile shear strength 1 - 2 MPa
at +80 °C in a convection oven

Curing time until functional strength [h] 5
tensile shear strength > 10 MPa
at room temperature (approx. 23 °C)

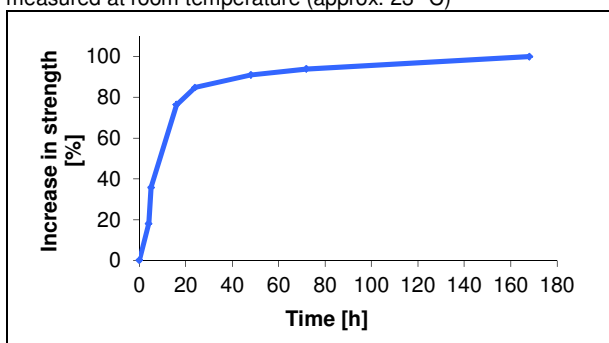
Curing time until functional strength [min] < 10
tensile shear strength > 10 MPa
at +80 °C in a convection oven

Curing time until final strength [d] 7
at room temperature (approx. 23 °C)

Curing time until final strength [min] 60
at +80 °C in a convection oven

Tensile shear strength A/AI [MPa] 32
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
curing: 7 d at room temperature (approx. 23 °C)

based on initial value at room temperature
measured at room temperature (approx. 23 °C)



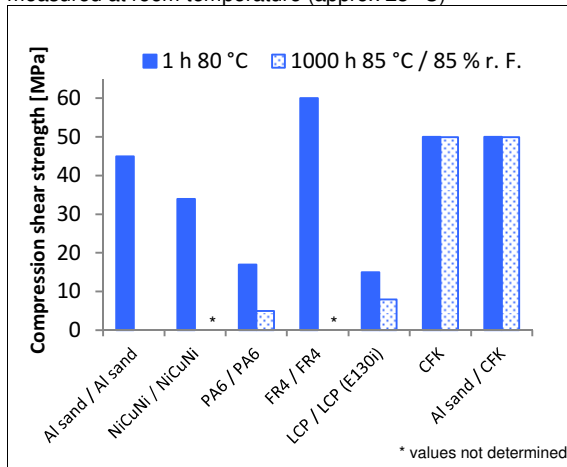
Tensile shear strength St/St [MPa] 24
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
curing: 7 d at room temperature (approx. 23 °C)

Compression shear strength AI/AI [MPa] 30
DELO standard 5, sand-blasted
curing: 7 d room temperature (approx. 23 °C)

Compression shear strength

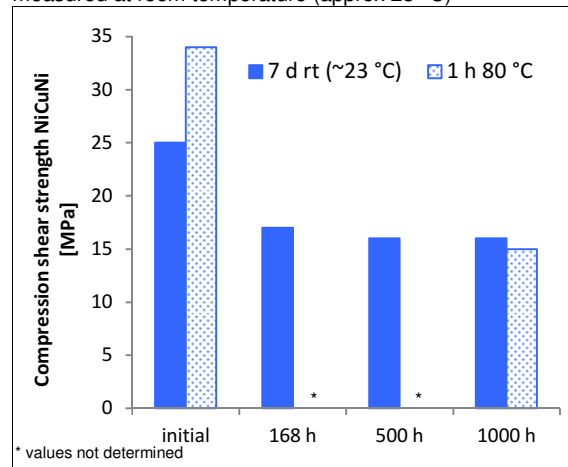
DELO standard 5

on different substrates and temperature aging
curing: 1 h at +80 °C
measured at room temperature (approx 23 °C)



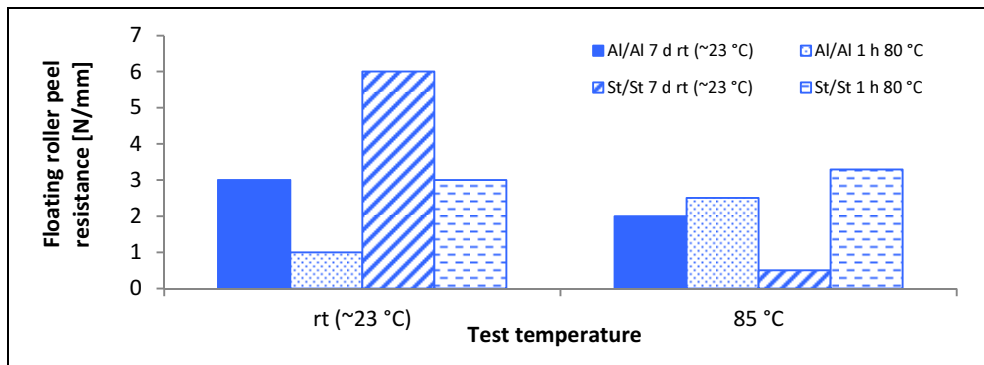
Adherend breakage: FR4 / FR4, CFK / CFK, Al sand / CFK

on nickel
aging at 85 °C / 85 % r. F
measured at room temperature (approx 23 °C)



Floating roller peel test

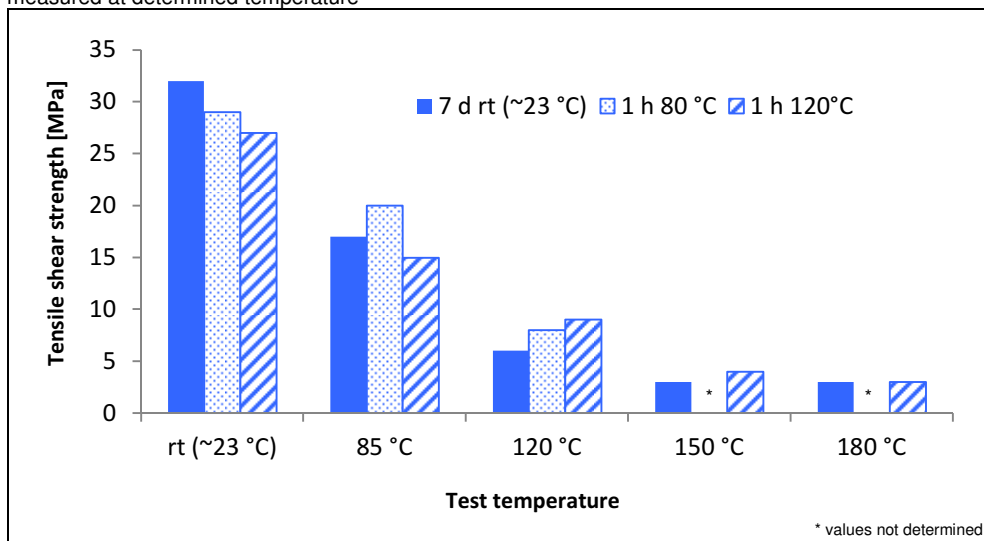
DELO standard 38, sand-blasted



Temperature stability Al/Al

DIN EN 1465, sand-blasted
component thickness: 1.6 mm

measured at determined temperature

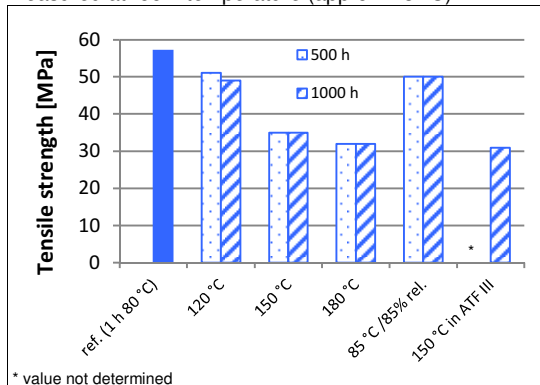


Tensile strength [MPa] DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	46
Elongation at tear [%] DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	3.5
Young's modulus [MPa] DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	3300
Shore hardness D according to DIN EN ISO 868 curing: 7 d room temperature (approx. 23 °C)	77
Shore hardness D according to DIN EN ISO 868 curing: 1 h at +80 °C	82
Glass transition temperature [°C] 2nd heating process, DMTA	126
Volume shrinkage [vol. %] curing: 7 d room temperature (approx. 23 °C)	3
Volume shrinkage [vol. %] curing: 1 h at +80 °C	3
Water absorption [weight %] DIN EN ISO 62 curing: 7 d room temperature (approx. 23 °C)	0.15
Decomposition temperature [°C] DELO standard 36 curing: 7 d room temperature (approx. 23 °C)	294
Storage life at room temperature (approx. 23 °C) in unopened original container	12 months

Performance under temperature and media influence

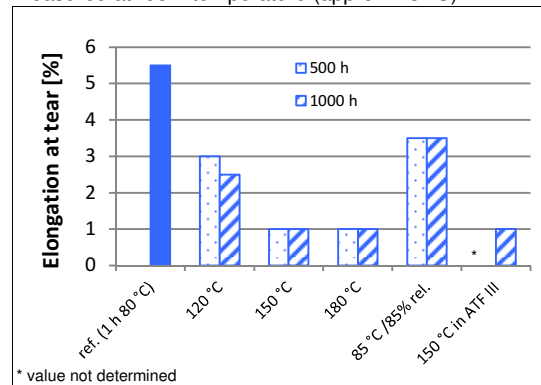
Tensile strength

after 500 h / 1,000 h thermal ageing
by the criteria of DIN EN ISO 527
layer thickness: 4 mm
curing: 1 h at +80 °C
measured at room temperature (approx. 23 °C)



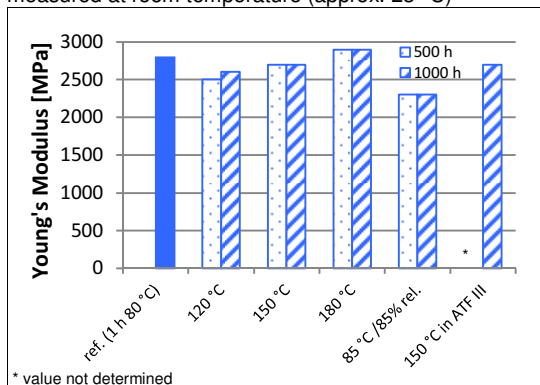
Elongation at tear

after 500 h / 1,000 h thermal ageing
by the criteria of DIN EN ISO 527
layer thickness: 4 mm
curing: 1 h at +80 °C
measured at room temperature (approx. 23 °C)



Young's Modulus

after 500 h / 1,000 h thermal ageing
by the criteria of DIN EN ISO 527
layer thickness: 4 mm
curing: 1 h at +80 °C
measured at room temperature (approx. 23 °C)



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
curing: 1 h at +80 °C

Chemical medium	Compression/shear strength AI/AI [%]
ATF gear oil	93
diesel fuel	100
engine oil 10W40	93
petrol (E10)	88
distilled water/ glycol-mixture 50:50	95

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.