

### **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 <sup>3</sup> ] DIN 66137-2, measured with helium pycnometer at room temperature (approx. 23 °C)	1.16
Density of component B [g/cm <sup>3</sup> ] 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

**Maximum 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)

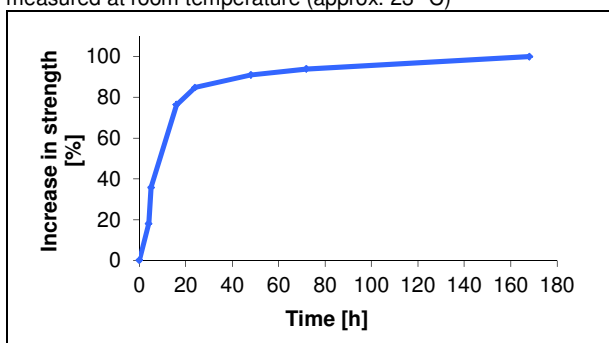
**Curing time until functional strength [min]** < 10  
 tensile shear strength > 10 MPa  
 at +80 °C in a convection oven

**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  
 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)

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



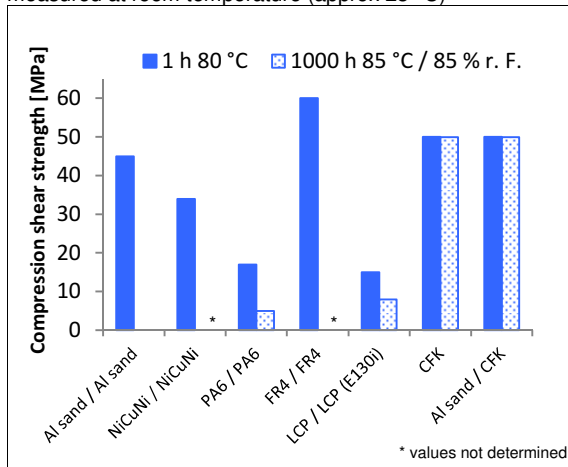
**Tensile shear strength St/St [MPa]** 24  
 by the criteria of DIN EN 1465, sand-blasted  
 component thickness: 1.6 mm gap: 0.1 mm  
 curing: 7d at room temperature (approx. 23 °C)

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

## Compression shear strength

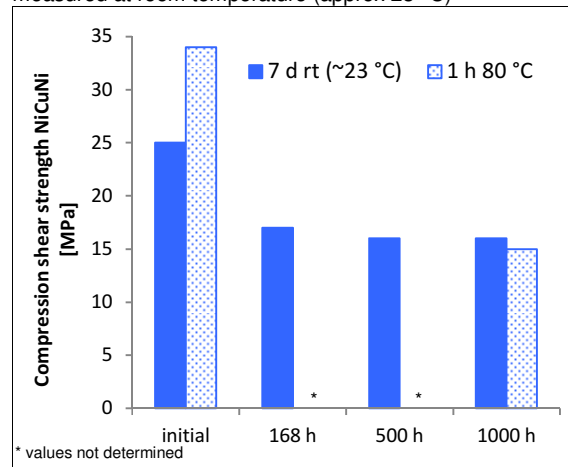
DELO standard 5

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



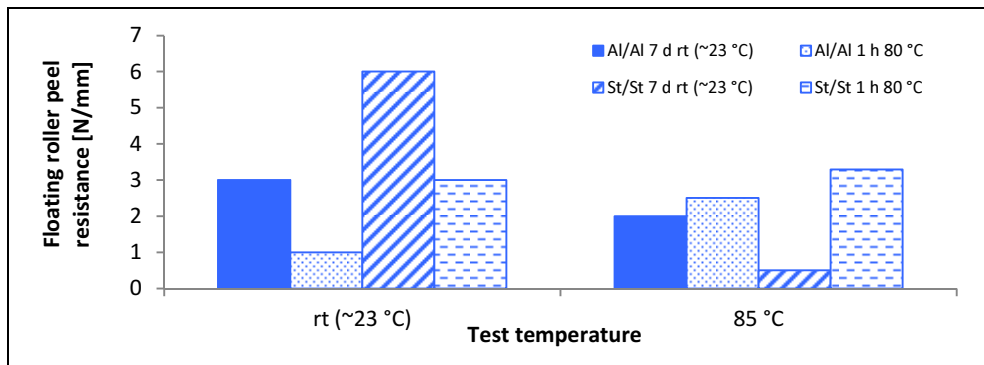
Adherend breakage: FR4 / FR4, CFK / CFK, Al sand / CFK

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



## Floating roller peel test

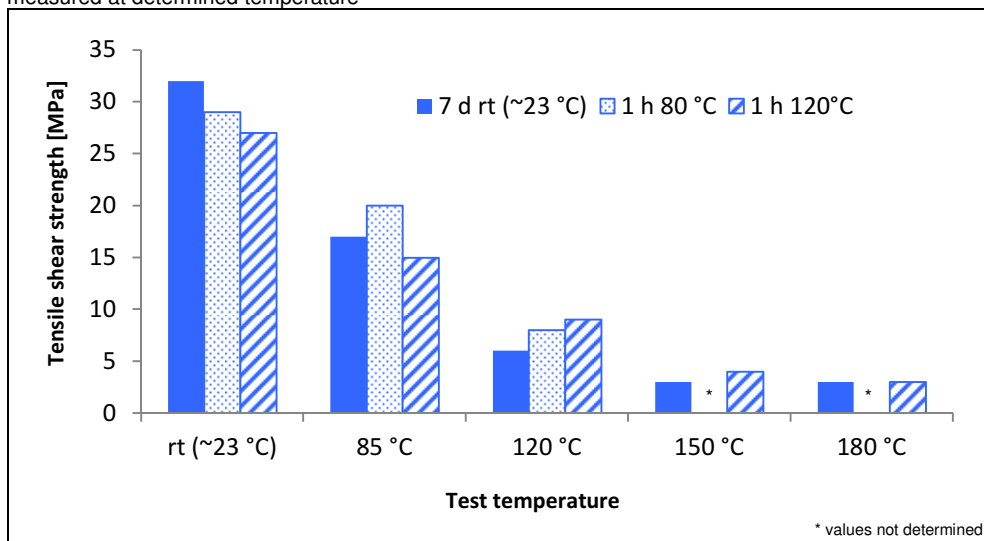
DELO standard 38, sand-blasted



## Temperature stability Al/Al

by the criteria of DIN EN 1465,  
component thickness 1.6 mm

measured at determined temperature

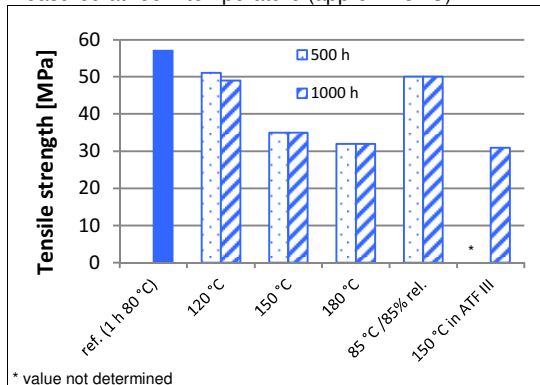


<b>Tensile strength [MPa]</b> According to standard DIN EN ISO 527 Curing: 7 d room temperature (approx. 23 °C)	46
<b>Elongation at tear [%]</b> According to standard DIN EN ISO 527 Curing: 7 d room temperature (approx. 23 °C)	3.5
<b>Young's modulus [MPa]</b> According to standard DIN EN ISO 527 Curing: 7 d room temperature (approx. 23 °C)	3300
<b>Shore hardness D</b> according to DIN EN ISO 868 curing: 7 d room temperature (approx. 23 °C)	77
<b>Shore hardness D</b> according to DIN EN ISO 868 curing: 1 h at +80 °C	82
<b><i>Glass transition temperature [°C]</i></b> 2nd heating process, DMTA	126
<b>Coefficient of linear expansion [ppm/K]</b> TMA, DELO Standard 26 in a temperature range of +35 °C to +100 °C	82
<b>Coefficient of linear expansion [ppm/K]</b> TMA, DELO Standard 26 in a temperature range of +120 °C to +175 °C	171
<b>Volume shrinkage [vol. %]</b> curing: 7 d room temperature (approx. 23 °C)	3
<b>Volume shrinkage [vol. %]</b> curing: 1 h at +80 °C	3
<b>Water absorption [weight %]</b> According to standard DIN EN ISO 62 Curing: 7 d room temperature (approx. 23 °C)	0.15
<b>Decomposition temperature [°C]</b> DELO standard 36 curing: 7 d room temperature (approx. 23 °C)	294
<b>Storage life at room temperature (approx. 23 °C)</b> in unopened original container	12 months

## Performance under temperature and media influence

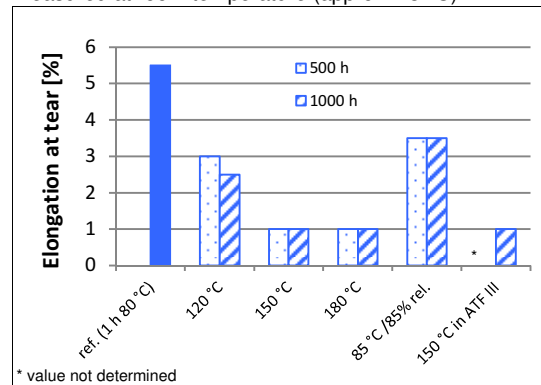
### Tensile strength

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)



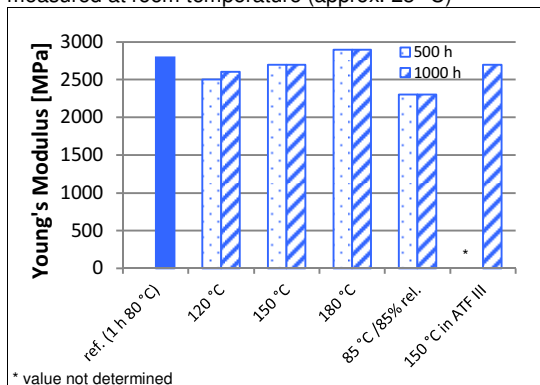
### Elongation at tear

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](http://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.