

DELO[®]-PUR 9691

polyurethane | 2C | room-temperature-curing

filled | flowable, suitable for DELO-AUTOMIX, very good media resistance

Special features of product

- compliant with RoHS Directive 2015/863/EU
- tested for biocompatibility and meets the requirements according to DIN EN ISO 10993-5: test for cytotoxicity
- passes ANSI/UL 94 HB Flame Test
- Component B is humidity-sensitive

Typical area of use

- -40 - 125 °C
- metal bondings
- mixed bondings with plastics

Curing

Curing time

<i>until initial strength at rt approx. +23 °C tensile shear strength 1 - 2 MPa</i>	90	min
<i>until functional strength at rt approx. +23 °C tensile shear strength > 10 MPa</i>	6	h
<i>until final strength at rt approx. +23 °C</i>	72	h
<i>until functional strength at +80 °C tensile shear strength > 10 MPa</i>	20	min
<i>until final strength at +80 °C</i>	22	min

Processing

Mixing ratio A : B - volume	1 : 1	
Mixing ratio A : B - weight	1 : 1	
Processing time after mixing		
<i>in 3 g batch at rt approx. +23 °C</i>	10	min
Reaction temperature (max.)		
<i>in 100 g batch</i>	40	°C

Storage life in unopened original container

at +15 °C to +30 °C 6 month(s)

Technical properties

Color in cured condition in 1 mm layer thickness black

Transparency in cured condition in 1 mm layer thickness opaque

Filler particle type minerals

Parameters

Density 1.45 g/cm³
DELO Standard 13 | liquid

Viscosity 80000 mPa·s
Component A | liquid | Viscosimeter

Viscosity 80000 mPa·s
Component B | liquid | Viscosimeter

Tensile shear strength 2.5 MPa
*Based on DIN EN 1465 | **AI** | **AI** | Pretreatment: sand-blasted | at approx. +23 °C | 7 d | Measuring temperature: 100 °C*

Tensile shear strength 12 MPa
*Based on DIN EN 1465 | **AI** | **AI** | Pretreatment: sand-blasted | at approx. +23 °C | 24 h*

Tensile shear strength 13 MPa
*Based on DIN EN 1465 | **AI** | **AI** | Pretreatment: sand-blasted | at approx. +23 °C | 72 h*

Tensile shear strength 16 MPa
*Based on DIN EN 1465 | **AI** | **AI** | Pretreatment: sand-blasted | at approx. +23 °C | 168 h*

Peel resistance 6 N/mm
*DELO Standard 38 | **Steel** | **Steel** | Pretreatment: sand-blasted | at approx. +23 °C | 7 d*

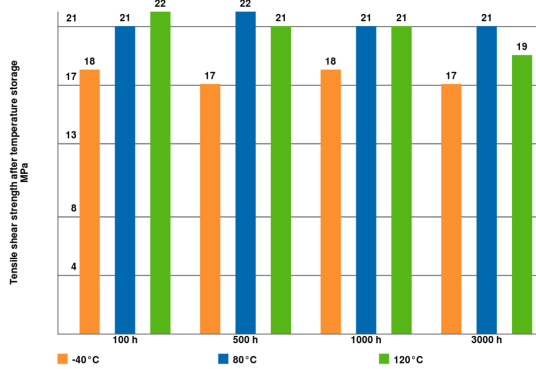
Tensile strength 13 MPa
Based on DIN EN ISO 527 | at approx. +23 °C | 7 d

Elongation at tear 20 %
Based on DIN EN ISO 527 | at approx. +23 °C | 7 d

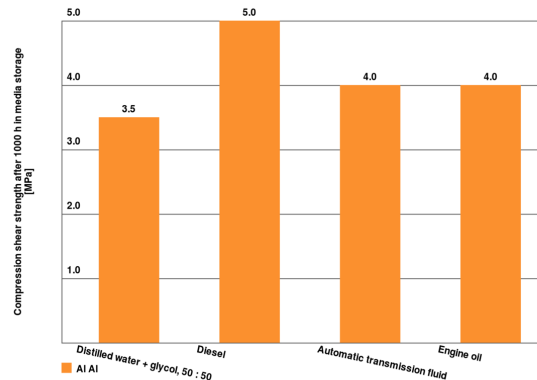
Young's modulus 500 MPa
Based on DIN EN ISO 527 | at approx. +23 °C | 7 d

Shore hardness D <i>Based on DIN EN ISO 868 at approx. +23 °C 7 d</i>	69	
Glass transition temperature <i>DELO Standard 24 Rheometer</i>	49	°C
Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: 25 °C - 140 °C</i>	162	ppm/K
Water absorption <i>Based on DIN EN ISO 62 Type of storage: Media Medium: Distilled water Storage temperature: at approx. +23 °C Duration: 24 h</i>	0.24	wt. %
Decomposition temperature <i>DELO Standard 36 Type of storage: Temp. Storage temperature: 100 °C Duration: 24 h</i>	225	°C
Volume resistivity <i>Based on VDE 0303-30</i>	>1xE13	Ohm·cm
Surface resistance <i>Based on DIN EN 62631-3-2</i>	>1xE13	Ohm
Dielectric strength <i>Based on DIN EN 60243-1</i>	16.6	kV/mm
Creep resistance CTI M <i>Based on DIN EN 60112</i>	600	

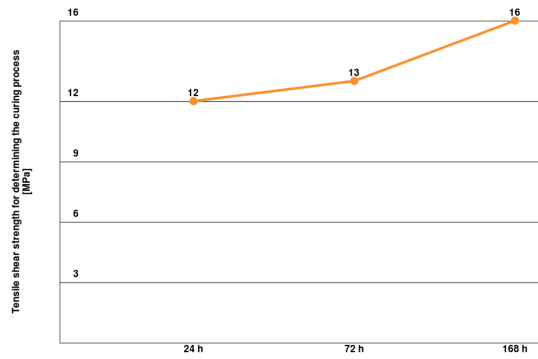
Tensile shear strength after temperature storage / based on DIN EN 1465



Media resistance after 1000 h

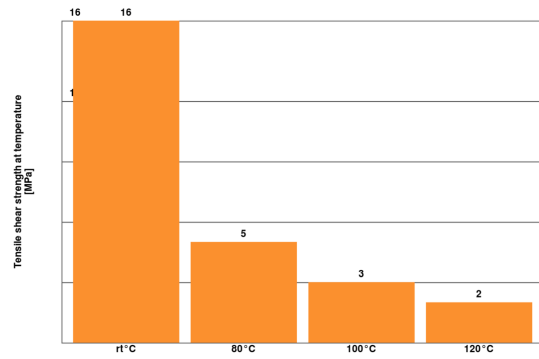


Substrates: Al/Al, based on DIN EN 1465



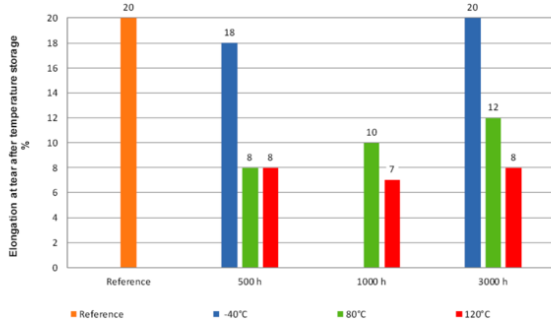
at roomtemperature (approx. 23°C)

Tensile shear strength measured at stated temperatures

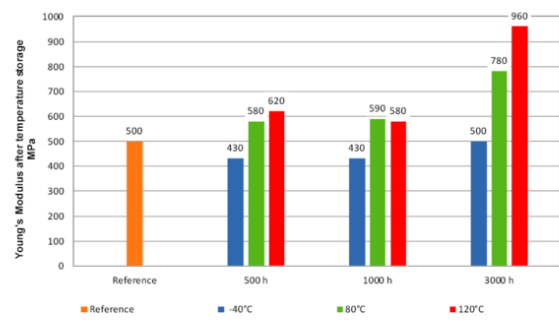


Substrates: Al / Al

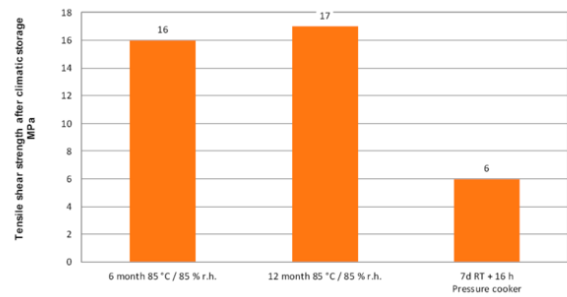
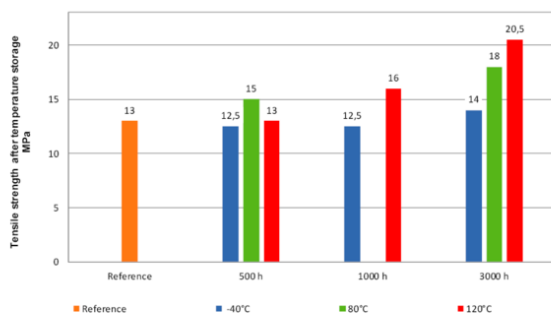
Elongation at tear after temperature storage / based on DIN EN ISO 527



Young's Modulus after temperature storage / based on DIN EN ISO 527



Tensile strength after temperature storage / based on DIN EN ISO 527



Converting table

°F	= (°C x 1.8) + 32	1 MPa	= 145.04 psi
1 inch	= 25.4 mm	1 GPa	= 145.04 ksi
1 mil	= 25.4 µm	1 cP	= 1 mPa·s
1 oz	= 28.3495 g	1 N	= 0.225 lb

General curing and processing information

The curing time stated in the technical data was determined in the laboratory. It can vary depending on the adhesive quantity and component geometry and is therefore a reference value. Unless otherwise specified, the values were measured after 168 h at approx. 23 °C / 50 % r. h., and the values of heat-cured samples were measured after 24 h at approx. 23 °C / 50 % r. h.

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.

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Instructions for use

You can find further details in the instructions for use.

The instructions for use are available on www.DELO-adhesives.com.

We will be pleased to send them to you on demand.

Occupational health and safety

See material safety data sheet.

Specification

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CONTACT

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ADHESIVES

DISPENSING

CURING

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