

DELO[®]-PUR 9691

polyurethane | 2C | room-temperature-curing

filled | flowable, suitable for side-by-side cartridges, 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
Storage life in unopened original container	
<i>at +15 °C to +30 °C</i>	6 month(s)

Technical properties

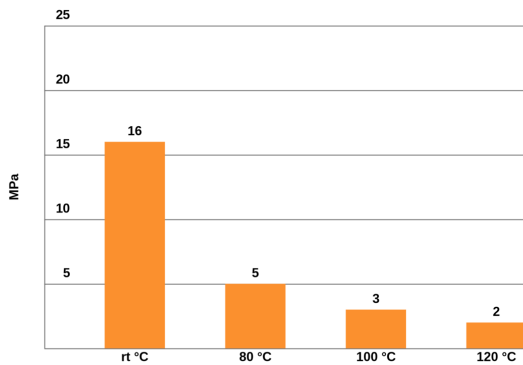
Color in cured condition in 1 mm layer thickness	black
Transparency in cured condition in 1 mm layer thickness	opaque
Filler particle type	minerals

Parameters

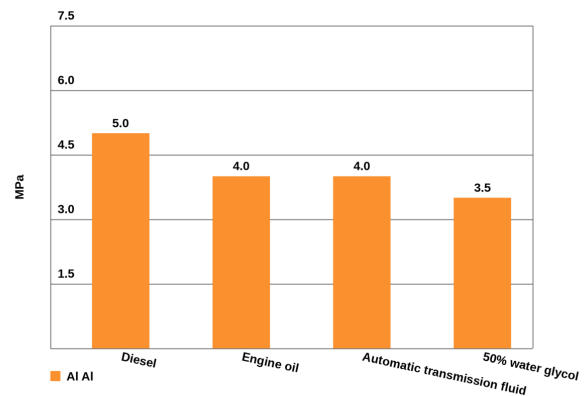
Density <i>DELO Standard 13 liquid</i>	1.45	g/cm ³
Viscosity <i>Component A liquid Viscosimeter</i>	80000	mPa·s
Viscosity <i>Component B liquid Viscosimeter</i>	80000	mPa·s
Tensile shear strength <i>by the criteria of DIN EN 1465 AI AI Pretreatment: sand-blasted at approx. +23 °C 7 d Measuring temperature: 100 °C</i>	2.5	MPa
Tensile shear strength <i>by the criteria of DIN EN 1465 AI AI Pretreatment: sand-blasted at approx. +23 °C 24 h</i>	12	MPa
Tensile shear strength <i>by the criteria of DIN EN 1465 AI AI Pretreatment: sand-blasted at approx. +23 °C 72 h</i>	13	MPa
Tensile shear strength <i>by the criteria of DIN EN 1465 AI AI Pretreatment: sand-blasted at approx. +23 °C 168 h</i>	16	MPa
Peel resistance <i>DELO Standard 38 Steel Steel Pretreatment: sand-blasted at approx. +23 °C 7 d</i>	6	N/mm
Tensile strength <i>by the criteria of DIN EN ISO 527 at approx. +23 °C 7 d</i>	13	MPa
Elongation at tear <i>by the criteria of DIN EN ISO 527 at approx. +23 °C 7 d</i>	20	%
Young's modulus <i>by the criteria of DIN EN ISO 527 at approx. +23 °C 7 d</i>	500	MPa
Shore hardness D <i>by the criteria of 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>by the criteria of DIN EN ISO 62 Layer thickness: 4 mm 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</i>	225	°C
Volume resistivity	>1E14	Ohm·cm
Surface resistance <i>by the criteria of DIN EN 62631-3-2</i>	>1E13	Ohm
Dielectric strength <i>by the criteria of DIN EN 60243-1</i>	16.6	kV/mm
Creep resistance CTI M <i>by the criteria of DIN EN 60112</i>	600	

Tensile shear strength measured at the stated temperatures
Substrates: Al/Al, based on DIN EN 1465

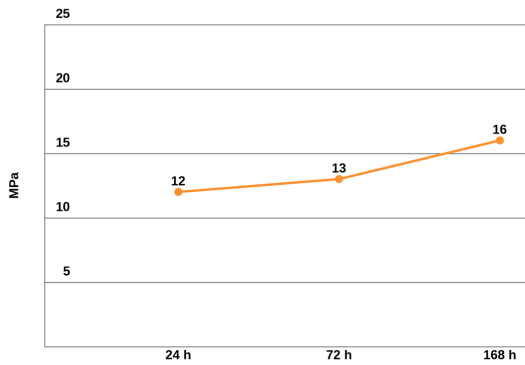


Compression shear strength after media storage for 1000 h



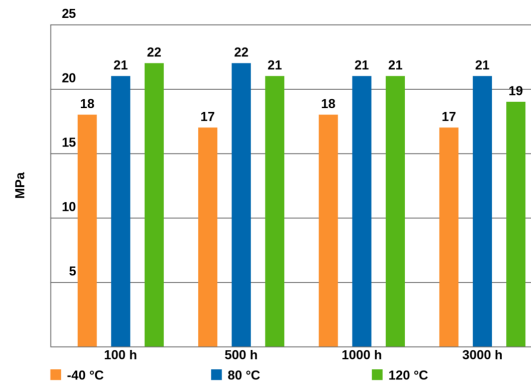
DELO Standard 5

Tensile shear strength for determining the curing process
Substrates: Al/Al, by the criteria of DIN EN 1465

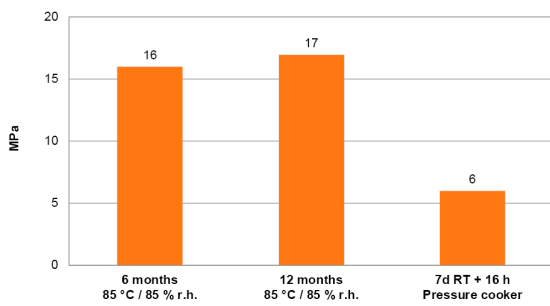


at room temperature (approx. +23 °C)

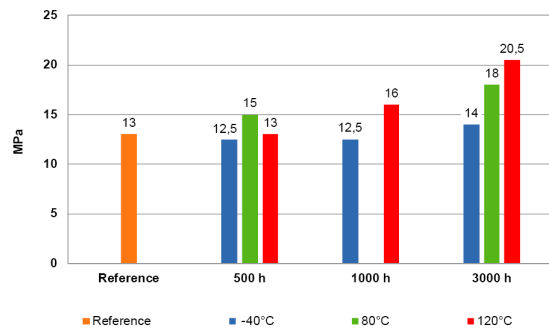
Tensile shear strength after thermal storage
Substrates: Al/Al, by the criteria of DIN EN 1465



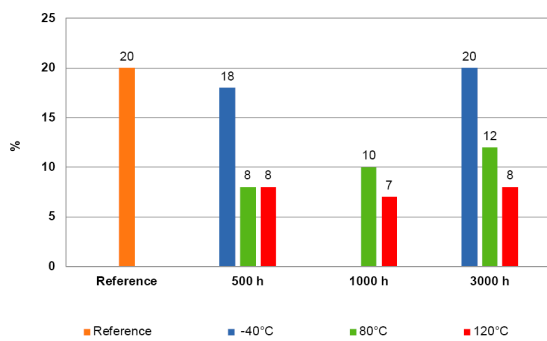
Tensile shear strength after climatic storage
Substrates: Al/Al, by the criteria of DIN EN 1465



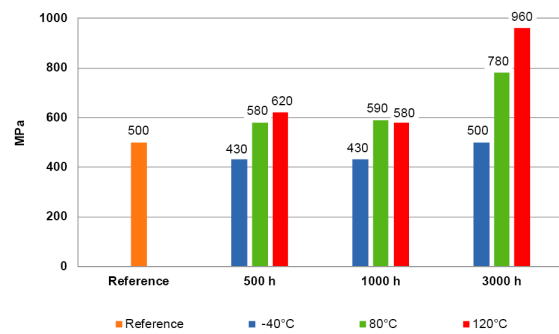
Tensile strength after thermal storage / by the criteria of DIN EN ISO 527



Elongation at tear after thermal storage / by the criteria of DIN EN ISO 527



Young's modulus after thermal storage / by the criteria of 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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