

# DELO-DUOPOX<sup>®</sup> AD840

## modified epoxy resin | 2C | room-temperature-curing

filled, thixotropic | 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

### Function

- construction adhesive

### Typical area of use

- 40 - 150 °C

### Curing

#### Curing time

until initial strength at rt approx. +23 °C tensile shear strength 1 - 2 MPa	7	h
until functional strength at rt approx. +23 °C tensile shear strength > 10 MPa	16	h
until final strength at rt approx. +23 °C	7	d
until initial strength at +80 °C tensile shear strength 1 - 2 MPa	13	min
until functional strength at +80 °C tensile shear strength > 10 MPa	20	min
until final strength at +80 °C	1	h

### Processing

Mixing ratio A : B - volume	1 : 1
Mixing ratio A : B - weight	0.88 : 1
Processing time after mixing	
in 100 g batch at rt approx. +23 °C	90 min

## Reaction temperature (max.)

<i>in 100 g batch</i>	86	°C
<i>at rt approx. +23 °C</i>		

## Storage life in unopened original container

<i>at +15 °C to +30 °C</i>	12	month(s)
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## Technical properties

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

## Parameters

Density <i>Component A   liquid</i>	1.18	g/cm <sup>3</sup>
Density <i>Component B   liquid</i>	1.33	g/cm <sup>3</sup>
Viscosity <i>Component A   liquid   Rheometer   Shear rate: 2 1/s   Gap: 500 µm</i>	110000	mPa·s
Viscosity <i>Component B   liquid   Rheometer   Shear rate: 2 1/s   Gap: 500 µm</i>	125000	mPa·s
Tensile shear strength <i>Based on DIN EN 1465   <b>AI</b>   <b>AI</b>   Pretreatment: sand-blasted   at approx. +23 °C   7 d   Measuring temperature: 100 °C</i>	5	MPa
Tensile shear strength <i>Based on DIN EN 1465   <b>AI</b>   <b>AI</b>   Pretreatment: sand-blasted   at approx. +23 °C   7 d   Measuring temperature: 120 °C</i>	4	MPa
Tensile shear strength <i>Based on DIN EN 1465   <b>AI</b>   <b>AI</b>   Pretreatment: sand-blasted   at approx. +23 °C   168 h</i>	22	MPa
Tensile shear strength <i>Based on DIN EN 1465   <b>Steel</b>   <b>Steel</b>   Pretreatment: sand-blasted   at approx. +23 °C   7 d</i>	22	MPa
Compression shear strength <i>DELO Standard 5   <b>ABS</b>   <b>ABS</b>   at approx. +23 °C   7 d</i>	7.5	MPa

Compression shear strength <i>DELO Standard 5   <b>Al</b>   <b>Al</b>   at approx. +23 °C   7 d</i>	26	MPa
Compression shear strength <i>DELO Standard 5   <b>Stainless steel</b>   <b>Stainless steel</b>   at approx. +23 °C   7 d</i>	30	MPa
Compression shear strength <i>DELO Standard 5   <b>Glass</b>   <b>Glass</b>   at approx. +23 °C   7 d</i>	29	MPa
Compression shear strength <i>DELO Standard 5   <b>PA6</b>   <b>PA6</b>   Pretreatment: Annealing   at approx. +23 °C   7 d</i>	17	MPa
Compression shear strength <i>DELO Standard 5   <b>PC-ABS</b>   <b>PC-ABS</b>   at approx. +23 °C   7 d</i>	13	MPa
Peel resistance <i>DELO Standard 38   <b>Steel</b>   <b>Steel</b>   Pretreatment: sand-blasted   at approx. +23 °C   7 d</i>	6	N/mm
Tensile strength <i>Based on DIN EN ISO 527   at approx. +23 °C   7 d</i>	30	MPa
Elongation at tear <i>Based on DIN EN ISO 527   at approx. +23 °C   7 d</i>	6	%
Young's modulus <i>Based on DIN EN ISO 527   at approx. +23 °C   7 d</i>	1700	MPa
Shore hardness D <i>Based on DIN EN ISO 868   at approx. +23 °C   7 d</i>	76	
Glass transition temperature <i>DELO Standard 24   Rheometer   at approx. +23 °C   7 d</i>	69	°C
Coefficient of linear expansion <i>DELO Standard 26   TMA   Evaluation T: 30 °C - 50 °C</i>	100	ppm/K
Coefficient of linear expansion <i>DELO Standard 26   TMA   Evaluation T: 30 °C - 150 °C</i>	160	ppm/K
Coefficient of linear expansion <i>DELO Standard 26   TMA   Evaluation T: 90 °C - 150 °C</i>	186	ppm/K
Shrinkage <i>DELO Standard 13   at approx. +23 °C   7 d</i>	3	vol. %
Water absorption <i>Based on DIN EN ISO 62   at approx. +23 °C   7 d   Type of storage: Media   Medium: Distilled water   Storage temperature: at approx. +23 °C   Duration: 24 h</i>	0.18	wt. %

Decomposition temperature 280 °C  
DELO Standard 36 / at approx. +23 °C / 7 d / Type of storage: Temp. / Storage temperature: 100 °C /  
Duration: 24 h

Volume resistivity 3.9xE14 Ohm·cm  
Based on DIN EN 62631-3-1

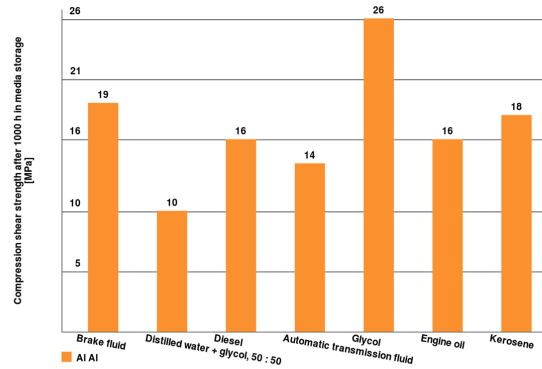
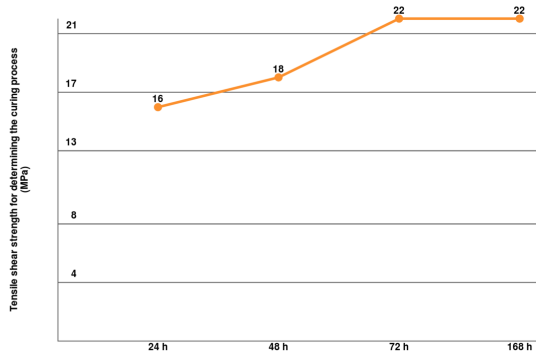
Surface resistance 2.6xE14 Ohm  
Based on DIN EN 62631-3-2

Dielectric strength 25 kV/mm  
Based on DIN EN 60243-1

Creep resistance CTI M 600  
Based on DIN EN 60112

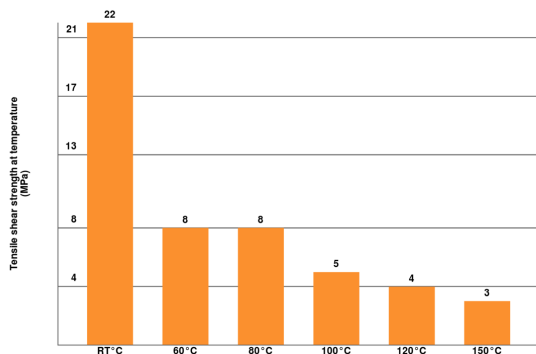
Substrates: Al/Al, based on DIN EN 1465

Media resistance after 1000 h



at room temperature (approx. 23°C)

Tensile shear strength measured at stated temperatures



Substrates: Al / Al

**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

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**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. Curing can be supported or accelerated by heat input. Additional heat input can change the physical properties of the product. Values measured after 24 h at approx. 23 °C / 50 % r.h., unless otherwise specified.

**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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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**

You can find further details in the instructions for use.

The instructions for use are available on [www.DELO-adhesives.com](http://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**

Nothing contained in this Technical Datasheet shall be interpreted as any express warranty or guarantee. This Technical Datasheet is for reference only and does not constitute a product specification. Please ask our

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## CONTACT

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