

DELO-DUOPOX[®] 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

<i>until initial strength at rt approx. +23 °C tensile shear strength 1 - 2 MPa</i>	7	h
<i>until functional strength at rt approx. +23 °C tensile shear strength > 10 MPa</i>	16	h
<i>until final strength at rt approx. +23 °C</i>	7	d
<i>until initial strength at +80 °C tensile shear strength 1 - 2 MPa</i>	13	min
<i>until functional strength at +80 °C tensile shear strength > 10 MPa</i>	20	min
<i>until final strength at +80 °C</i>	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 90 min
at rt approx. +23 °C

Reaction temperature (max.)

in 100 g batch 86 °C
at rt approx. +23 °C

Storage life in unopened original container

at +15 °C to +30 °C 12 month(s)

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 1.18 g/cm³
Component A | liquid

Density 1.33 g/cm³
Component B | liquid

Viscosity 125000 mPa·s
Component B | liquid | Rheometer | Shear rate: 2 1/s | Gap: 500 µm

Viscosity 110000 mPa·s
Component A | liquid | Rheometer | Shear rate: 2 1/s | Gap: 500 µm

Tensile shear strength 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 22 MPa
*Based on DIN EN 1465 | **Steel** | **Steel** | Pretreatment: sand-blasted | at approx. +23 °C | 7 d*

Tensile shear strength <i>Based on DIN EN 1465 AI AI 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 AI AI Pretreatment: sand-blasted at approx. +23 °C 168 h</i>	22	MPa
Compression shear strength <i>DELO Standard 5 Stainless steel Stainless steel at approx. +23 °C 7 d</i>	30	MPa
Compression shear strength <i>DELO Standard 5 Glass Glass at approx. +23 °C 7 d</i>	29	MPa
Compression shear strength <i>DELO Standard 5 PC-ABS PC-ABS at approx. +23 °C 7 d</i>	13	MPa
Compression shear strength <i>DELO Standard 5 AI AI at approx. +23 °C 7 d</i>	26	MPa
Compression shear strength <i>DELO Standard 5 PA6 PA6 Pretreatment: Annealing at approx. +23 °C 7 d</i>	17	MPa
Compression shear strength <i>DELO Standard 5 ABS ABS at approx. +23 °C 7 d</i>	7.5	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>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: 90 °C - 150 °C</i>	186	ppm/K

Coefficient of linear expansion 160 ppm/K
DELO Standard 26 | TMA | Evaluation T: 30 °C - 150 °C

Coefficient of linear expansion 100 ppm/K
DELO Standard 26 | TMA | Evaluation T: 30 °C - 50 °C

Shrinkage 3 vol. %
DELO Standard 13 | at approx. +23 °C | 7 d

Water absorption 0.18 wt. %
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

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

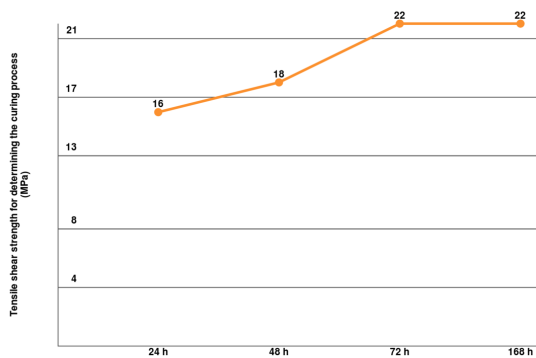
Surface resistance 2.6xE14 Ohm
Based on DIN EN 62631-3-2

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

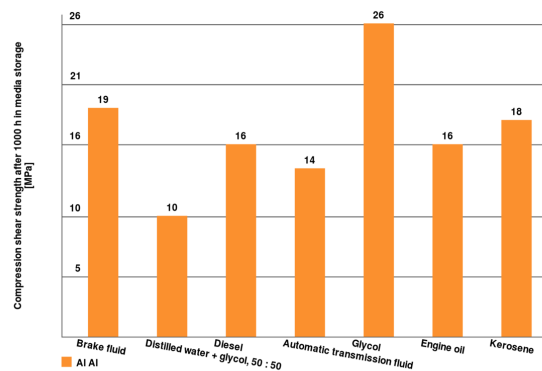
Creep resistance CTI M 600
Based on DIN EN 60112

Substrates: Al/Al, based on DIN EN 1465

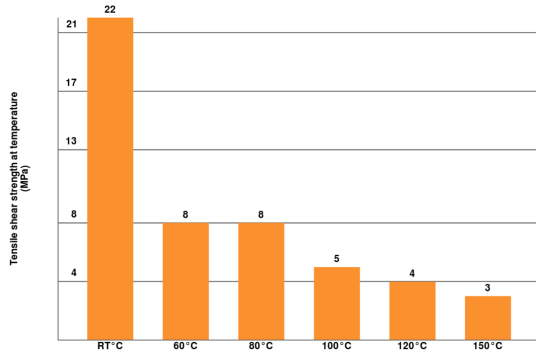
Media resistance after 1000 h



at roomtemperature (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

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.

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 responsible Sales Engineer for the applicable product specification which includes defined ranges. DELO is neither liable for any values and content of this Technical Datasheet nor for oral or written recommendations regarding the use, unless otherwise agreed in writing. This limitation of liability is not applicable for damages resulting from intent, gross negligence or culpable breach of cardinal obligations, nor shall it apply in case of death or personal injury or in case of liability under any applicable compulsory law.

CONTACT

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ADHESIVES

DISPENSING

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