

DELO-DUOPOX® DK839

Multi-purpose 2c epoxy resin, cures at room temperature, medium-viscous, unfilled

Base

- epoxy resin
- two-component

Use

- multi-purpose adhesive
- in mechanical engineering and tool construction
- in electrical engineering and electronics
- impact-resistant, especially for peel-sensitive bondings
- the cured product is normally used in a temperature range of -40 °C to +100 °C; depending on the application, other limits may be more reasonable
- compliant with RoHS directive 2015/863/EU

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

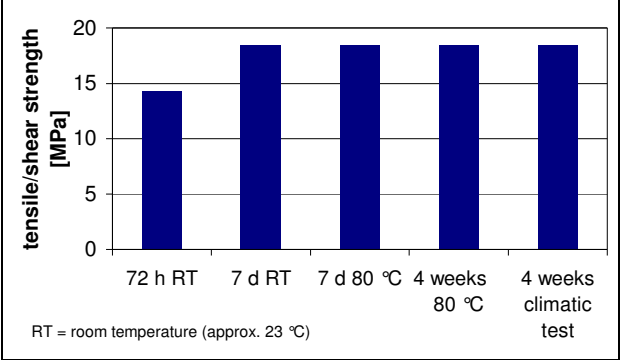
Curing

- proceeds at room temperature (approx. 23 °C)
- increased temperatures accelerate curing
- applying heat could change physical characteristics

Technical data

<i>Color</i>	yellowish
Filler	unfilled
Mixing ratio (A : B) according to volume	1 : 1
(A : B) according to weight	10 : 9
Density of component A [g/cm ³] DELO Standard 13 at room temperature (approx. 23 °C)	1.02
Density of component B [g/cm ³] DELO Standard 13 at room temperature (approx. 23 °C)	1.14
<i>Viscosity of component A</i> [mPas] Brookfield at 23 °C	30000

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Viscosity of component B [mPas] Brookfield at 23 °C	65000												
Processing time in 100 g preparation [min] at room temperature (approx. 23 °C)	30												
Maximum reaction temperature [°C] in 100 g preparation	95												
Curing time until initial strength [h] tensile shear strength 1 - 2 MPa at room temperature (approx. 23 °C)	6												
Curing time until functional strength [h] tensile shear strength > 10 MPa at room temperature (approx. 23 °C)	48												
Curing time until final strength [h] at room temperature (approx. 23 °C)	72												
Curing time until final strength [h] at +60 °C	5												
Tensile shear strength Al/Al [MPa] 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)	18												
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 <table border="1"> <caption>Tensile/Shear Strength Data from Chart</caption> <thead> <tr> <th>Curing Condition</th> <th>Tensile/Shear Strength [MPa]</th> </tr> </thead> <tbody> <tr> <td>72 h RT</td> <td>~14</td> </tr> <tr> <td>7 d RT</td> <td>~18</td> </tr> <tr> <td>7 d 80 °C</td> <td>~18</td> </tr> <tr> <td>4 weeks 80 °C</td> <td>~18</td> </tr> <tr> <td>4 weeks climatic test</td> <td>~18</td> </tr> </tbody> </table>		Curing Condition	Tensile/Shear Strength [MPa]	72 h RT	~14	7 d RT	~18	7 d 80 °C	~18	4 weeks 80 °C	~18	4 weeks climatic test	~18
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7 d 80 °C	~18												
4 weeks 80 °C	~18												
4 weeks climatic test	~18												
Floating roller peel resistance St/St [N/mm] DELO Standard 38, St/St sand-blasted component thickness: 1.6 mm and 0.5 mm	3.9												
Compression shear strength PA/PA [MPa] standard DELO 5	9												
Tensile strength [MPa] DIN EN ISO 527	15												
Elongation at tear [%] according to DIN EN ISO 527	12												
Young's modulus [MPa] according to DIN EN ISO 527	500												
Shore hardness D according to DIN EN ISO 868	63												
Decomposition temperature [°C] DELO Standard 36	190												
Glass transition temperature [°C] Rheometer, 2nd heating process	65												

Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +140 °C	194
Water absorption [weight %] according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	0.6
Specific volume resistance [Ωcm] VDE 0303, part 3	>1xE13
Surface resistance [Ω] VDE 0303, part 3	>1xE11
Creep resistance CTI VDE 0303, part 1, IEC 112	575 M
Storage life at room temperature (approx. 23 °C) in unopened original container (volume per component < 1l)	12 months
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	

Chemical medium	Compression/shear strength AI/AI [%]
ATF gear oil	75
Diesel fuel	81
engine oil 10W40	88
petrol	81
demineralised water / glykol mixture 50:50	79
NaOH 5%	66

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. 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.