

# DELO-DUOPOX CR8720

## modified epoxy resin | 2C | heat-curing

thixotropic, filled | very good temperature resistance

### Special features of product

- compliant with RoHS Directive 2015/863/EU
- halogen-free according to IEC 61249-2-21
- Component B is humidity-sensitive
- Long-term annealing of components A and B up to max. +40 °C
- The filler may sediment. Therefore, the individual components must be stirred before use
- Any formation of bubbles during homogenization or mixing can be significantly minimized by using a processing system with vacuum unit

### Function

- encapsulant / potting compound
- electronic encapsulant
- Fill for Dam&Fill

### Typical area of use

- -40 - 200 °C

### Curing

Curing time

<i>at +130 °C</i>	60	min
<i>at +150 °C</i>	20	min

### Processing

Mixing ratio A : B - volume	0.93 : 1
Mixing ratio A : B - weight	0.94 : 1
Storage life in unopened original container	
<i>at +15 °C to +30 °C</i>	9 month(s)

### Technical properties

Color in cured condition in 0.1 mm layer thickness	black
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Transparency in cured condition in 0.1 mm layer thickness	opaque	
Fluorescence	fluorescent	
Filler particle type	minerals	
Filler particle size of component A	d95 = 65 µm	
Filler particle size of component B	d95 = 65 µm	
Filler content of component A	78	wt. %
Filler content of component B	75	wt. %
Density of component A	1.85	g/cm <sup>3</sup>
Density of component B	1.83	g/cm <sup>3</sup>

**Parameters**

Viscosity of component A <i>Liquid   Rheometer   Shear rate: 10 1/s   Gap: 200 µm</i>	28500	mPa·s
Viscosity of component B <i>Liquid   Rheometer   Shear rate: 10 1/s   Gap: 200 µm</i>	7000	mPa·s
Compression shear strength <i>DELO Standard 5   Sn   Sn   150 °C   20 min</i>	28	MPa
Compression shear strength <i>DELO Standard 5   PPS   PPS   150 °C   20 min</i>	40	MPa
Compression shear strength <i>DELO Standard 5   FR4   FR4   150 °C   20 min</i>	55	MPa
Compression shear strength <i>DELO Standard 5   Cu   Cu   150 °C   20 min</i>	8	MPa
Compression shear strength <i>DELO Standard 5   Al   Al   150 °C   20 min</i>	37	MPa
Compression shear strength <i>DELO Standard 5   PBT   PBT   150 °C   20 min</i>	22	MPa

Tensile strength <i>Based on DIN EN ISO 527   150 °C   20 min</i>	72	MPa
Elongation at tear <i>Based on DIN EN ISO 527   150 °C   20 min</i>	0.5	%
Young's modulus <i>Based on DIN EN ISO 527   150 °C   20 min</i>	15000	MPa
Shore hardness D <i>Based on DIN EN ISO 868   150 °C   20 min</i>	92	
Glass transition temperature <i>DELO Standard 26   TMA   150 °C   20 min</i>	175	°C
Coefficient of linear expansion <i>DELO Standard 26   TMA   Evaluation T: 30 °C - 150 °C   150 °C   20 min</i>	18	ppm/K
Shrinkage <i>DELO Standard 13   150 °C   20 min</i>	1	vol. %
Water absorption <i>Based on DIN EN ISO 62   150 °C   20 min   Type of storage: Media   Medium: Distilled water   Temp.: at approx. +23 °C</i>	0.07	wt. %
Decomposition temperature <i>DELO Standard 36</i>	311	°C
Specific thermal conductivity <i>Based on ASTM E1461   150 °C   20 min</i>	0.6	W/(m·K)
Specific thermal conductivity <i>DELO Standard 47   Cu   Cu   150 °C   20 min</i>	0.6	W/(m·K)
Volume resistivity <i>Based on DIN IEC 60093   150 °C   20 min</i>	>5E+15	Ohm·cm
Surface resistance <i>Based on DIN IEC 60093   150 °C   20 min</i>	>2E+14	Ohm
Dielectric strength <i>150 °C   20 min</i>	>22	kV/mm
Relative permittivity <i>Based on DIN 53483-2   150 °C   20 min   1.00 MHz</i>	3.5	

Relative permittivity 3.5  
*Based on DIN 53483-2 | 150 °C | 20 min | 100.00 kHz*

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Relative permittivity 3.6  
*Based on DIN 53483-2 | 150 °C | 20 min | 1.00 kHz*

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**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. The heating time of the components must be added to the actual curing time. It depends on component size and oven type. The specified curing temperature must be reached directly at the adhesive. Increasing or decreasing the curing temperature and / or irradiation intensity and / or irradiation time shortens or prolongs the curing time and can lead to changed physical properties. Depending on the adhesive quantity used, exothermic reaction heat is generated which can lead to overheating. In this case, a lower curing temperature is to be selected. 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. 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 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 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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