

# DELO-DUOPOX<sup>®</sup> CR8021

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

tension-equalizing, flowable, very good media resistance, suitable for side-by-side cartridges, unfilled

### Special features of product

- compliant with RoHS Directive 2015/863/EU
- passes ANSI/UL 94 HB Flame Test
- Long-term preheating of components is possible
- 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

### Typical area of use

- -40 - 140 °C

### Curing

Curing time

|  |     |     |
|--|-----|-----|
| <i>until initial strength<br/>at rt approx. +23 °C<br/>tensile shear strength 1 - 2 MPa</i>      | 5.5 | h   |
| <i>until functional strength<br/>at rt approx. +23 °C<br/>tensile shear strength &gt; 10 MPa</i> | 48  | h   |
| <i>until final strength<br/>at rt approx. +23 °C</i>   | 72  | h   |
| <i>until initial strength<br/>at +80 °C<br/>tensile shear strength 1 - 2 MPa</i>                 | 5   | min |
| <i>until functional strength<br/>at +80 °C<br/>tensile shear strength &gt; 10 MPa</i>            | 15  | min |

### Processing

|                             |          |
|-----------------------------|----------|
| Mixing ratio A : B - volume | 0.5 : 1  |
| Mixing ratio A : B - weight | 0.58 : 1 |

Processing time after mixing

*in 100 g batch  
at rt approx. +23 °C* 60 min

Storage life in unopened original container

*at +18 °C to +25 °C* 12 month(s)

**Technical properties**

Color in cured condition in 1 mm layer thickness yellowish

Transparency in cured condition in 1 mm layer thickness translucent

**Parameters**

Density *Component A | liquid* 1.18 g/cm<sup>3</sup>

Density *Component B | liquid* 1.03 g/cm<sup>3</sup>

Viscosity *Component A | liquid | Rheometer | Shear rate: 2 1/s | Gap: 37 µm* 34000 mPa·s

Viscosity *Component B | liquid | Rheometer | Shear rate: 2 1/s | Gap: 37 µm* 10000 mPa·s

Tensile shear strength *by the criteria of DIN EN 1465 | **Al | Al** | Pretreatment: sand-blasted | at approx. +23 °C | 168 h* 11 MPa

Tensile shear strength *by the criteria of DIN EN 1465 | **Steel | Steel** | Pretreatment: sand-blasted | at approx. +23 °C | 168 h* 12 MPa

Peel resistance *DELO Standard 38 | **Steel | Steel** | Pretreatment: sand-blasted | at approx. +23 °C | 168 h* 3 N/mm

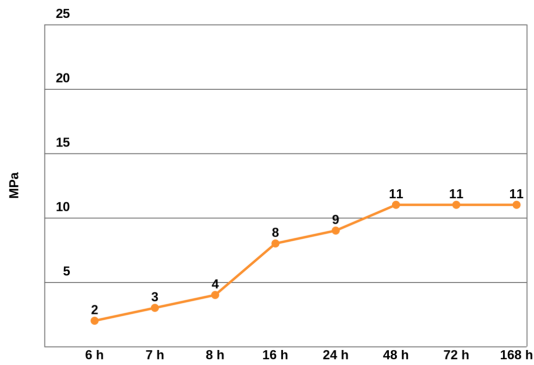
Tensile strength *by the criteria of DIN EN ISO 527 | at approx. +23 °C | 168 h* 9 MPa

Elongation at tear *by the criteria of DIN EN ISO 527 | at approx. +23 °C | 168 h* 35 %

Young's modulus *by the criteria of DIN EN ISO 527 | at approx. +23 °C | 168 h* 100 MPa

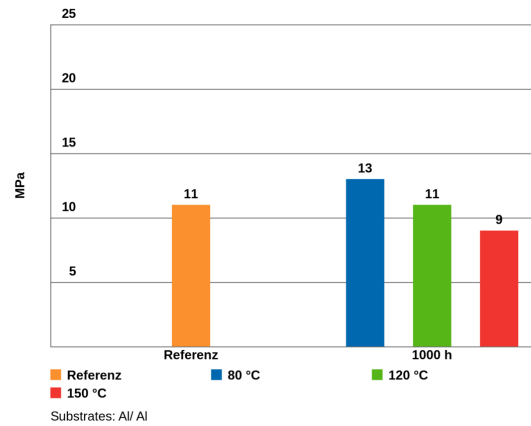
|  |       |        |
|--|-------|--------|
| Shore hardness D<br><i>by the criteria of DIN EN ISO 868   at approx. +23 °C   168 h</i>   | 47    |        |
| Glass transition temperature<br><i>DMTA   at approx. +23 °C   168 h</i>  | 47    | °C     |
| Coefficient of linear expansion<br><i>DELO Standard 26   TMA   Evaluation T: 30 °C - 150 °C   at approx. +23 °C   168 h</i>  | 250   | ppm/K  |
| Shrinkage<br><i>DELO Standard 13   at approx. +23 °C   168 h</i>   | 3     | vol. % |
| Water absorption<br><i>by the criteria of DIN EN ISO 62   Layer thickness: 4 mm   at approx. +23 °C   168 h   Type of storage: Media   Medium: Distilled water   Storage temperature: at approx. +23 °C   Duration: 24 h</i> | 0.5   | wt. %  |
| Decomposition temperature<br><i>DELO Standard 36   at approx. +23 °C   168 h</i>   | 277   | °C     |
| Volume resistivity<br><i>by the criteria of DIN EN 62631-3-1   at approx. +23 °C   168 h</i>   | >1E12 | Ohm·cm |
| Surface resistance<br><i>by the criteria of DIN EN 62631-3-2   at approx. +23 °C   168 h</i>   | >1E11 | Ohm    |
| Relative permittivity<br><i>by the criteria of RF-IV   1 MHz</i>   | 3.5   |        |
| Relative permittivity<br><i>by the criteria of RF-IV   1 GHz</i>   | 3.0   |        |
| Relative permittivity<br><i>by the criteria of RF-IV   10 MHz</i>  | 3.5   |        |
| Relative permittivity<br><i>by the criteria of RF-IV   100 MHz</i>   | 3.2   |        |
| Comparative Tracking Index<br><i>by the criteria of DIN EN 60112</i>   | 600   |        |

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

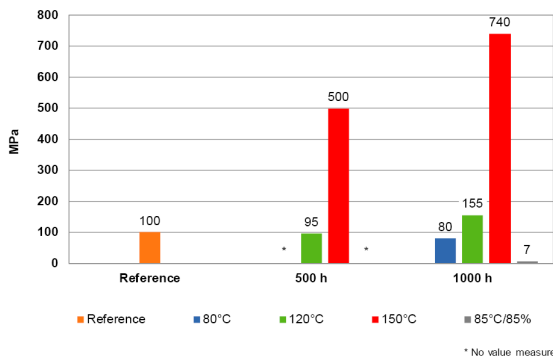


at room temperature (approx. +23 °C)

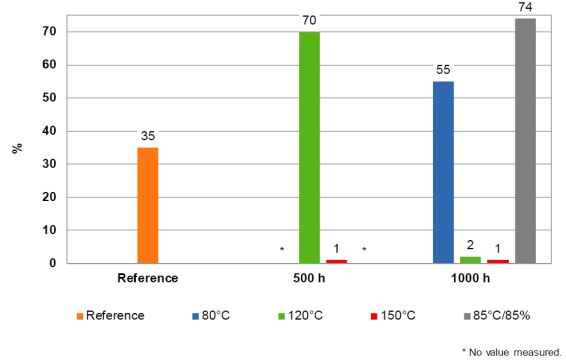
Tensile shear strength after thermal storage, by the criteria of DIN EN 1465



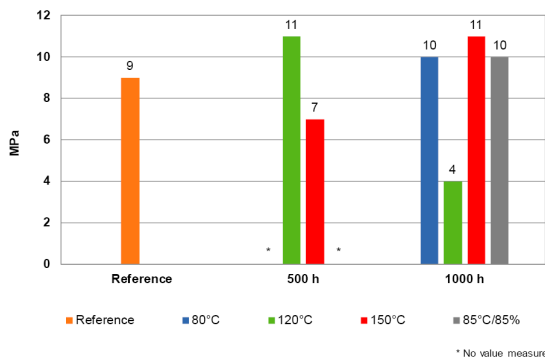
Young's Modulus after temperature storage, by the criteria of DIN EN ISO 527



Elongation at tear after temperature storage, by the criteria of DIN EN ISO 527



Tensile strength after temperature 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   |

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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

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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