

DELO-DUOPOX[®] CR8031

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

unfilled | very good temperature resistance, suitable for side-by-side cartridges

Special features of product

- compliant with RoHS Directive 2015/863/EU
- Long-term preheating of components is possible
- Remove the mixing tube immediately after finishing work. Store the cartridge vertically with the new mixing tube
- Any formation of bubbles during homogenization or mixing can be significantly minimized by using a processing system with vacuum unit

Function

- encapsulant / potting compound

Typical area of use

- -40 - 180 °C

Curing

Curing time

| | | |
|--|------|---|
| <i>until initial strength at rt approx. +23 °C tensile shear strength 1 - 2 MPa</i> | 8 | 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> | 168 | h |
| <i>until functional strength at +80 °C tensile shear strength > 10 MPa</i> | 0.25 | h |
| <i>until final strength at +80 °C</i> | 1 | h |

Processing

| | |
|-----------------------------|----------|
| Mixing ratio A : B - volume | 2 : 1 |
| Mixing ratio A : B - weight | 2.37 : 1 |

Processing time after mixing

*in 100 g batch
at rt approx. +23 °C* 85 min

Storage life in unopened original container

at +15 °C to +30 °C 6 month(s)

Technical properties

Color in cured condition in 1 mm layer thickness black

Transparency in cured condition in 1 mm layer thickness opaque

Parameters

Density *Component A | liquid* 1.15 g/cm³

Density *Component B | liquid* 0.97 g/cm³

Viscosity *Component A | liquid | Rheometer | Shear rate: 10 1/s | Gap: 37 µm* 18000 mPa·s

Viscosity *Component B | liquid | Rheometer | Shear rate: 10 1/s | Gap: 37 µm* 11000 mPa·s

Tensile shear strength *by the criteria of DIN EN 1465 | AI | AI | Pretreatment: sand-blasted | at approx. +23 °C | 168 h* 16 MPa

Tensile shear strength *by the criteria of DIN EN 1465 | AI | AI | Pretreatment: sand-blasted | 80 °C | 1 h* 28 MPa

Tensile strength *by the criteria of DIN EN ISO 527 | at approx. +23 °C | 7 d* 40 MPa

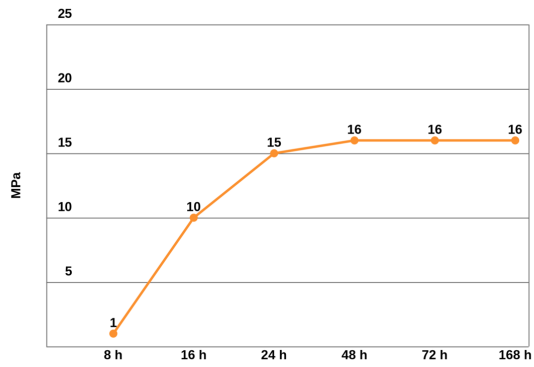
Tensile strength *by the criteria of DIN EN ISO 527 | 80 °C | 1 h* 48 MPa

Elongation at tear *by the criteria of DIN EN ISO 527 | at approx. +23 °C | 7 d* 5 %

Elongation at tear *by the criteria of DIN EN ISO 527 | 80 °C | 1 h* 3 %

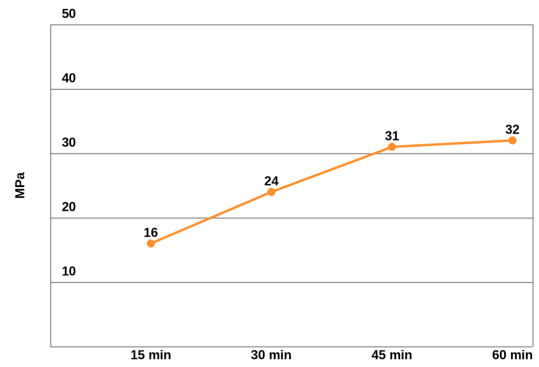
| | | |
|--|------|--------|
| Young's modulus <i>by the criteria of DIN EN ISO 527 at approx. +23 °C 7 d</i> | 1700 | MPa |
| Young's modulus <i>by the criteria of DIN EN ISO 527 80 °C 1 h</i> | 2100 | MPa |
| Shore hardness D <i>by the criteria of DIN EN ISO 868 at approx. +23 °C 7 d</i> | 72 | |
| Glass transition temperature <i>DMTA at approx. +23 °C 7 d</i> | 102 | °C |
| Glass transition temperature <i>DELO Standard 26 TMA at approx. +23 °C 7 d</i> | 66 | °C |
| Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: 30 °C - 50 °C at approx. +23 °C 7 d</i> | 112 | ppm/K |
| Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: 80 °C - 160 °C at approx. +23 °C 7 d</i> | 200 | ppm/K |
| Shrinkage <i>DELO Standard 13 at approx. +23 °C 7 d</i> | 4 | vol. % |
| Water absorption <i>by the criteria of DIN EN ISO 62 Layer thickness: 4 mm at approx. +23 °C 7 d Type of storage: Media Medium: Distilled water Storage temperature: at approx. +23 °C Duration: 24 h</i> | 0.23 | wt. % |
| Decomposition temperature <i>DELO Standard 36 at approx. +23 °C 7 d</i> | 252 | °C |
| Relative permittivity <i>by the criteria of RF-IV 1 MHz</i> | 3.2 | |
| Relative permittivity <i>by the criteria of RF-IV 1 GHz</i> | 3.0 | |
| Relative permittivity <i>by the criteria of RF-IV 10 MHz</i> | 3.2 | |
| Relative permittivity <i>by the criteria of RF-IV 100 MHz</i> | 3.1 | |

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

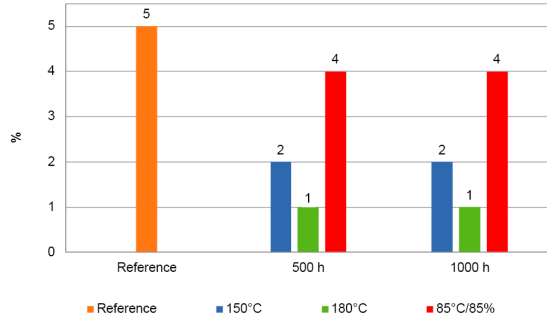


at room temperature (approx. +23 °C)

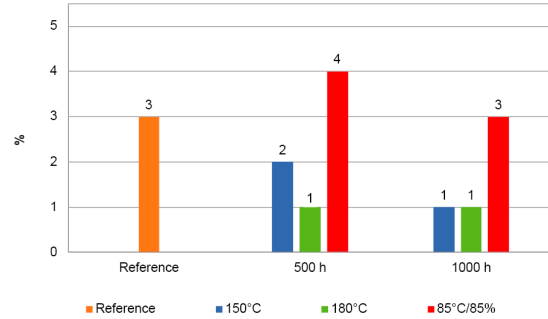
Tensile shear strength for determining the curing process at temperature
Substrates: Al/Al, curing: 80 °C, by the criteria of DIN EN 1465



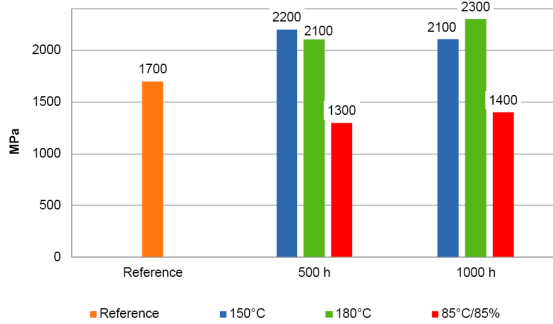
Elongation at tear after temperature storage / by the criteria of DIN EN ISO 527
7d RT



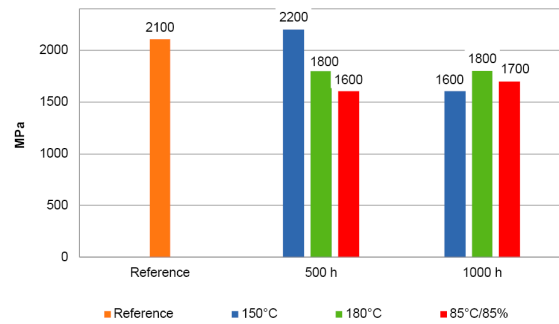
Elongation at tear after temperature storage / by the criteria of DIN EN ISO 527
1h +80°C



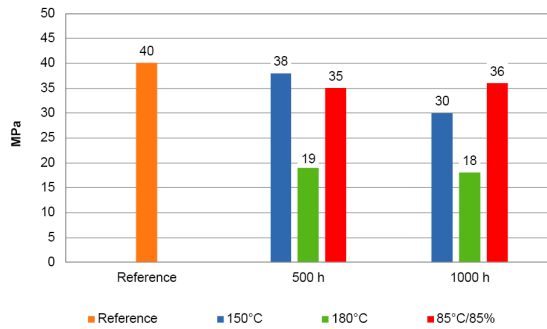
Young's Modulus after temperature storage / by the criteria of DIN EN ISO 527
7d RT



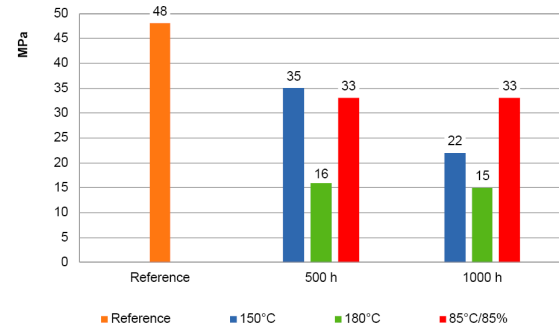
Young's Modulus after temperature storage / by the criteria of DIN EN ISO 527
1h +80°C



Tensile strength after temperature storage / by the criteria of DIN EN ISO 527
7d RT



Tensile strength after temperature storage / by the criteria of DIN EN ISO 527
1h +80°C



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

CURING

CONSULTING

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