

DELO-DUOPOX[®] TC8686

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

thermally conductive, suitable for side-by-side cartridges, filled

Special features of product

- passes ANSI/UL 94 V-0 Flame Test

Function

- electronic adhesive
- structural adhesive

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>	3.5	h
<i>until functional strength at rt approx. +23 °C tensile shear strength > 10 MPa</i>	8	h
<i>until final strength at rt approx. +23 °C</i>	168	h

Processing

Mixing ratio A : B - volume 2 : 1

Mixing ratio A : B - weight 2.22 : 1

Processing time after mixing

*in 10 g batch
at rt approx. +23 °C
DELO Standard 51* 45 min

Storage life in unopened original container

at 0 °C to +25 °C 6 month(s)

Technical properties

Color in cured condition in 1 mm layer thickness beige

Transparency in cured condition in 1 mm layer thickness opaque

Parameters

Density 1.74 g/cm³
Component A | liquid

Density 1.56 g/cm³
Component B | liquid

Viscosity 50000 mPa·s
Component A | liquid | Rheometer | Shear rate: 10 1/s | Gap: 500 µm

Viscosity 240000 mPa·s
Component B | liquid | Rheometer | Shear rate: 10 1/s | Gap: 500 µm

Tensile shear strength 18 MPa
*by the criteria of DIN EN 1465 | **AI | AI** | Pretreatment: sand-blasted | at approx. +23 °C | 168 h*

Tensile shear strength 18 MPa
*by the criteria of DIN EN 1465 | **AI | AI** | Pretreatment: sand-blasted | 80 °C | 60 min*

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

Tensile shear strength 18 MPa
*by the criteria of DIN EN 1465 | **Steel | Steel** | Pretreatment: sand-blasted | at approx. +23 °C | 168 h*

Compression shear strength 8 MPa
*DELO Standard 5 | **PA6 | PA6** | Pretreatment: Annealing | at approx. +23 °C | 168 h*

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

Elongation at tear 2 %
by the criteria of DIN EN ISO 527 | at approx. +23 °C | 168 h

Young's modulus 3700 MPa
by the criteria of DIN EN ISO 527 | at approx. +23 °C | 168 h

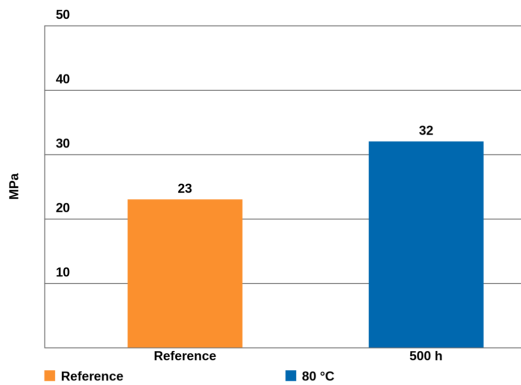
Young's modulus 5700 MPa
DMTA | at approx. +23 °C | 168 h

Shore hardness D 80
by the criteria of DIN EN ISO 868 | at approx. +23 °C | 168 h

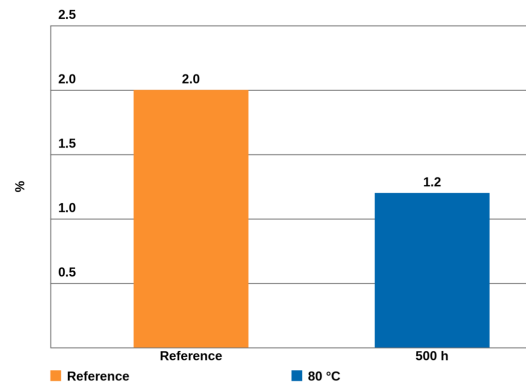
Glass transition temperature 85 °C
DMTA | at approx. +23 °C | 168 h

Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: -40 °C - 0 °C at approx. +23 °C 168 h</i>	52	ppm/K
Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: 75 °C - 115 °C at approx. +23 °C 168 h</i>	114	ppm/K
Shrinkage <i>DELO Standard 13 at approx. +23 °C 168 h</i>	2	vol. %
Water absorption <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</i>	0.1	wt. %
Decomposition temperature <i>DELO Standard 36 at approx. +23 °C 168 h</i>	247	°C
Specific thermal conductivity <i>by the criteria of ASTM D 5470 40 °C 24 h</i>	1.0	W/(m·K)
Dielectric strength <i>by the criteria of DIN EN 60243-1 80 °C 60 min</i>	22	kV/mm
Comparative Tracking Index <i>by the criteria of DIN EN 60112 80 °C 60 min</i>	600	

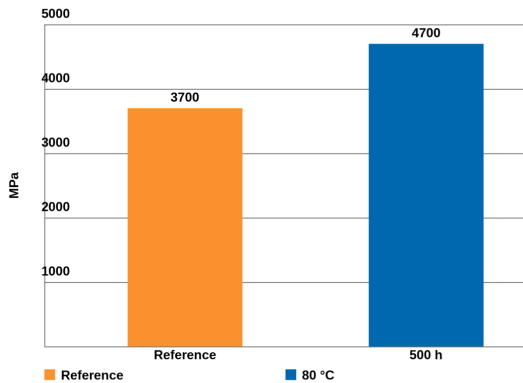
Tensile strength after temperature storage, by the criteria of DIN EN ISO 527



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



Young's modulus 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

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.

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

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