

DELO-DUOPOX® CR8021

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

Base

- epoxy resin
- two-component

Use

- multi-purpose
- in mechanical engineering and tool construction
- in electrical engineering and electronics
- good flow behavior, flexible
- the cured product is normally used in a temperature range of -40 °C to +140 °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 translucent
Mixing ratio (A : B) according to volume	0.5 : 1
(A : B) according to weight	0.58 : 1
Density of component A [g/cm³] measured with helium pycnometer at room temperature (approx. 23 °C)	1.18
Density of component B [g/cm³] measured with helium pycnometer at room temperature (approx. 23 °C)	1.03
Viscosity of component A [mPas] at 23 °C, rheometer (Paar) shear rate 2/s	34000

Viscosity of component B [mPas] 10000
at 23 °C, rheometer (Paar)
shear rate 2/s

Processing time in 100 g preparation [min] 60
at room temperature (approx. 23 °C)

Maximal reaction temperature [°C] 87
in 100 g preparation

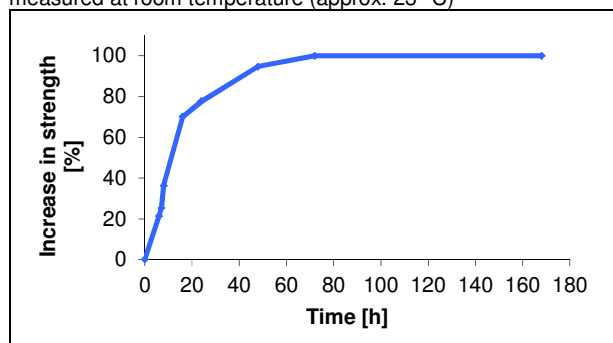
Curing time until initial strength [min] < 15
tensile shear strength 1 - 2 MPa
at +80 °C in a convection oven

Curing time until functional strength [min] 15
tensile shear strength > 10 MPa
at +80 °C in a convection oven

Curing time until final strength [h] 72
at room temperature (approx. 23 °C)

Tensile shear strength A/AI [MPa] 11
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
after 7 d at room temperature (ca. 23 °C)

based on initial value at room temperature
measured at room temperature (approx. 23 °C)



Tensile shear strength steel / steel [MPa] 12
DIN EN 1465, sand-blasted
component thickness: 1.6 mm
after 7 d at room temperature (ca. 23 °C)

Floating roller peel resistance steel / steel [N/mm] 3
DELO standard 38, sand-blasted
curing: 7 d at room temperature (approx. 23 °C)

Tensile strength [MPa] 9
DIN EN ISO 527
curing: 7 d room temperature (approx. 23 °C)

Elongation at tear [%] 35
DIN EN ISO 527
curing: 7 d room temperature (approx. 23 °C)

Young's modulus [MPa] 100
DIN EN ISO 527
curing: 7 d room temperature (approx. 23 °C)

Shore hardness D 47
according to DIN EN ISO 868
curing: 7 d room temperature (approx. 23 °C)

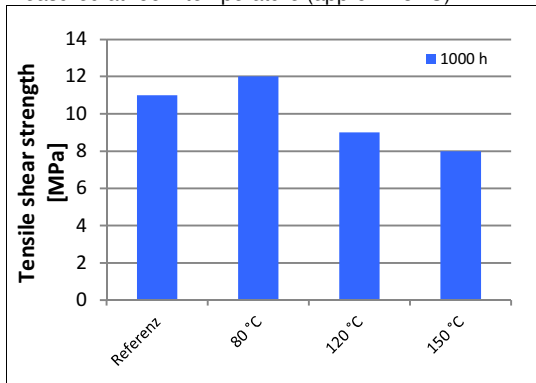
Glass transition temperature [°C] 47
2nd heating process, DMTA

Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +30 to +150 °C	250
Volume shrinkage [vol. %] curing: 7 d room temperature (approx. 23 °C)	3
Water absorption [weight %] DIN EN ISO 62 curing: 7 d room temperature (approx. 23 °C)	0.5
Decomposition temperature [°C] DELO standard 36 curing: 7 d room temperature (approx. 23 °C)	277
Creep resistance CTI DIN EN 60112	600
Dielectric constant RF-IV method, 1 MHz, at 25 °C +/- 3 °C	3.5
Dielectric constant RF-IV method, 10 MHz, at 25 °C +/- 3 °C	3.5
Dielectric constant RF-IV method, 100 MHz, at 25 °C +/- 3 °C	3.2
Dielectric constant RF-IV method, 1 GHz, at 25 °C +/- 3 °C	3.0
Storage life at room temperature (approx. 23 °C) in unopened original container	12 months

Performance under temperature influence

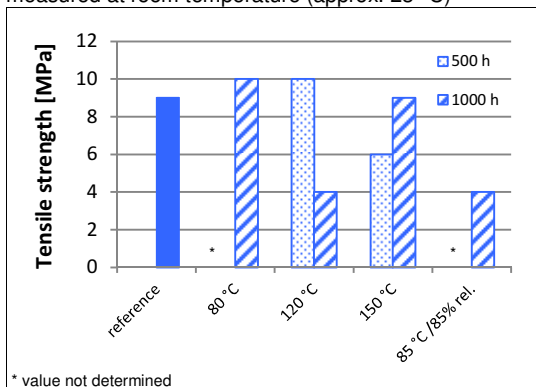
Tensile shear strength

after 1,000 h thermal ageing
 DIN EN 1465, sand-blasted
 component thickness: 1.6 mm
 curing: 7 d at room temperature (approx. 23 °C)
 measured at room temperature (approx. 23 °C)



Tensile strength

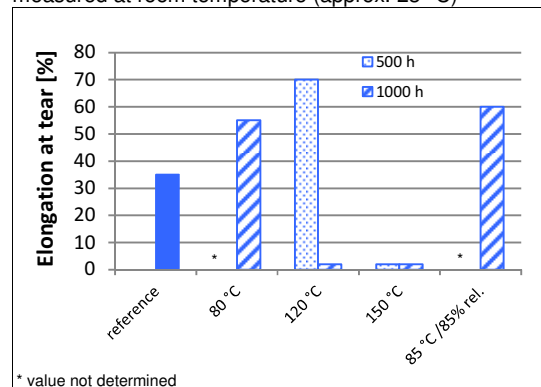
after 500 h / 1,000 h thermal ageing
 by the criteria of DIN EN ISO 527
 layer thickness: 4 mm
 curing: 7 d at room temperature (approx. 23 °C)
 measured at room temperature (approx. 23 °C)



* value not determined

Elongation at tear

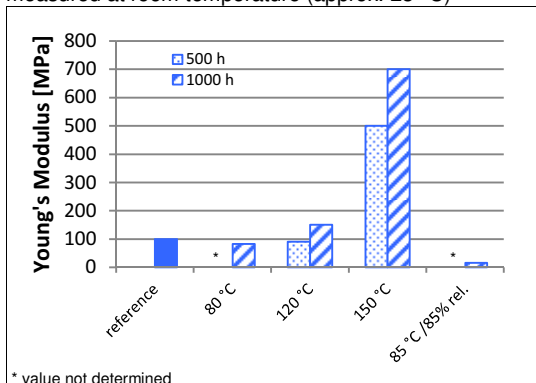
after 500 h / 1,000 h thermal ageing
 by the criteria of DIN EN ISO 527
 layer thickness: 4 mm
 curing: 7 d at room temperature (approx. 23 °C)
 measured at room temperature (approx. 23 °C)



* value not determined

Young's Modulus

after 500 h / 1,000 h thermal ageing
 by the criteria of DIN EN ISO 527
 layer thickness: 4 mm
 curing: 7 d at room temperature (approx. 23 °C)
 measured at room temperature (approx. 23 °C)



* value not determined

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.