

### **DELO-DUOPOX® CR8014**

Multi-purpose 2c epoxy casting resin, cures at room temperature, low-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
- successfully tested according to UL 94 HB (by an independent test institute)
- 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
- 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**

Color	yellowish
Mixing ratio (A : B) according to weight	0.84 : 1
(A : B) according to volume	0.72 : 1
Density of component A [g/cm <sup>3</sup> ] measured with helium pycnometer at room temperature (approx. 23 °C)	1.17
Density of component B [g/cm <sup>3</sup> ] measured with helium pycnometer at room temperature (approx. 23 °C)	0.98
Viscosity of component A [mPas] at 23 °C, rheometer (Paar) shear rate 2/s	10000

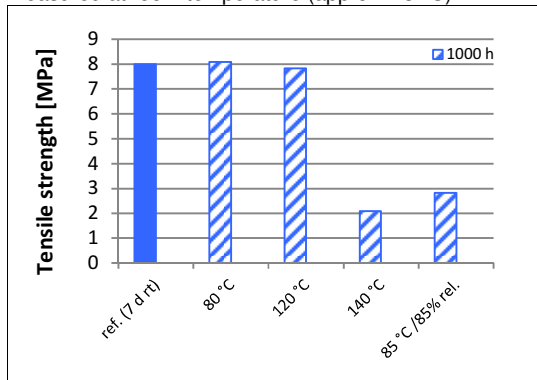
<b>Viscosity of component B [mPas]</b> at 23 °C, rheometer (Paar) shear rate 2/s	330
<b>Processing time in 100 g preparation [min]</b> at room temperature (approx. 23 °C)	50
<b>Maximal reaction temperature [°C]</b> in 100 g preparation	100
<b>Curing time until initial strength [h]</b> tensile shear strength 1 - 2 MPa at room temperature (approx. 23 °C)	8
<b>Curing time until initial strength [min]</b> tensile shear strength 1 - 2 MPa at +80 °C in a convection oven	< 15
<b>Curing time until functional strength [h]</b> tensile shear strength > 10 MPa at room temperature (approx. 23 °C)	48
<b>Curing time until functional strength [h]</b> tensile shear strength > 10 MPa at +80 °C in a convection oven	0.5
<b>Curing time until final strength [h]</b> at room temperature (approx. 23 °C)	72
<b>Curing time until final strength [h]</b> at +80 °C in a convection oven	2
<b>Tensile shear strength AI/AI [MPa]</b> DIN EN 1465, sand-blasted component thickness: 1.6 mm after 7d at room temperature (ca. 23 °C)	13
<b>Compression shear strength PA 6.6 GF30/PA 6.6 GF30 [MPa]</b> DELO standard 5 curing: 7 d at room temperature (approx. 23 °C)	9
<b>Compression shear strength PA 6 GF30/PA 6 GF30 [MPa]</b> DELO standard 5 curing: 7 d at room temperature (approx. 23 °C)	8
<b>Floating roller peel resistance steel / steel [N/mm]</b> DELO standard 38, sand-blasted curing: 7 d at room temperature (approx. 23 °C)	3
<b>Tensile strength [MPa]</b> DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	8
<b>Elongation at tear [%]</b> DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	45
<b>Young's modulus [MPa]</b> DIN EN ISO 527 curing: 7 d room temperature (approx. 23 °C)	< 100
<b>Shore hardness D</b> DIN EN ISO 868 Curing: 7 d at room temperature (approx. 23 °C)	46
<b>Glass transition temperature [°C]</b> DMTA, 2nd heating process	50
<b>Volume shrinkage [vol. %]</b> curing: 7 d room temperature (approx. 23 °C)	3.5

<b>Water absorption [weight %]</b> DIN EN ISO 62 curing: 7 d room temperature (approx. 23 °C)	0.6
<b>Decomposition temperature [°C]</b> DELO standard 36 curing: 7 d room temperature (approx. 23 °C)	208
<b>Specific volume resistance [Ωcm]</b> DIN IEC 60093	>1xE12
<b>Surface resistance</b> DIN IEC 60093	>1xE13
<b>Dielectric strength [kV/mm]</b> DIN IEC 60243-1 at 50 Hz	> 50
<b>Dielectric constant</b> RF-IV method, 1 MHz, at 25 °C +/- 3 °C	3.6
<b>Dielectric constant</b> RF-IV method, 10 MHz, at 25 °C +/- 3 °C	3.5
<b>Dielectric constant</b> RF-IV method, 100 MHz, at 25 °C +/- 3 °C	3.2
<b>Dielectric constant</b> RF-IV method, 1 GHz, at 25 °C +/- 3 °C	3.0
<b>Creep resistance CTI</b> DIN EN 60112	600
<b>Storage life</b> at room temperature (approx. 23 °C) in unopened original container	6 months

## Performance under temperature and media influence

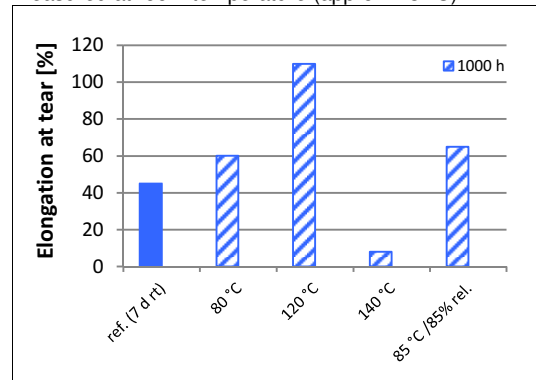
### Tensile strength

After 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)



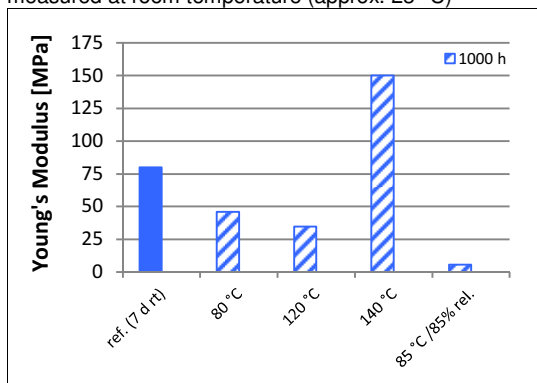
### Elongation at tear

after 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)



### Young's Modulus

after 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)



## 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](http://www.DELO.de). We will be pleased to send them to you on demand.

### Occupational health and safety

see material safety data sheet