

### **DELO-MONOPOX® AD295**

#### **Base**

- epoxy resin, structural adhesive
- one-part, heat-curing, filled

#### **Use**

- for bonding all metals, temperature-resistant plastic, ferrites, ceramics
- especially for high-strength, tough-hard bonds which have to withstand very high static as well as dynamic stress, also at high temperatures
- good flow properties
- outstanding chemical stability
- very high temperature stability
- meets the requirements of the thermal vacuum outgassing test for the screening of space materials according to ECSS Q-70-02

#### **Processing**

- to heat components, higher temperatures can also be used
- the heating time for components has to be added to the actual curing time
- for curing, the inside of the adhesive layer has to have the required temperature
- development of an exothermal reaction heat depends on the adhesive quantity used thus, overheating may occur, in this case the curing temperature has to be reduced accordingly
- the resin is supplied ready-to-use and best applied from the original container or with DELO dispensing units
- surfaces to be bonded should be dry, free from dust, grease and other contaminants
- DELOTHEN cleaners are recommended for cleaning
- adherence can be improved by sand-blasting, grinding or pickling

#### **Curing**

- at temperatures between +130 and +180 °C
- higher temperatures accelerate, lower temperatures prolong curing process and may change the properties of cured product

#### **Technical data**

Color	light beige
filler	minerals
Density [g/cm <sup>3</sup> ] at room temperature (approx. 23 °C)	1.6
Viscosity [mPas] at 23 °C, Brookfield sp/r 7/5	230000
Curing time until final strength [min] at +150 °C	40

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<b>Tensile shear strength Al/Al [MPa]</b> DIN EN 1465, sand-blasted join part thickness: 1.6 mm after 40 min at +150 °C	30
<b>floating roller peel resistance St/St [N/mm]</b> DIN 53289 according to EN 1465, sand-blasted join part thickness: 1.5 mm	10
<b>temperature stability Al/Al at +100 °C [MPa]</b> DIN 53286, sand-blasted join part thickness: 1.6 mm	26
<b>temperature stability Al/Al at +150 °C [MPa]</b> DIN 53286, sand-blasted join part thickness: 1.6 mm	9
<b>temperature stability Al/Al at +200 °C [MPa]</b> DIN 53286, sand-blasted join part thickness: 1.6 mm	3
<b>tensile strength [MPa]</b> DIN EN ISO 527, after 40 min at +150 °C	50
<b>elongation at tear [%]</b> DIN EN ISO 527, after 40 min at +150 °C	1.4
<b>Young modulus [MPa]</b> DIN EN ISO 527, after 40 min at +150 °C	5500
<b>shore hardness D</b> corresponding to DIN EN ISO 868	84
<b>glass transition temperature [°C]</b> rheometer	134
<b>coefficient of elongation [ppm/K]</b> TMA, in a temperature range of +30 to +90 °C	42
<b>coefficient of elongation [ppm/K]</b> TMA, in a temperature range of +130 to +180 °C	147
<b>shrinkage [vol. %]</b> standard DELO 13	2.5
<b>water absorption [weight %]</b> DIN EN ISO 62	0.12
<b>Recommended long-term temperature range of use [°C]</b>	-40 to +200
<b>temperature resistance [°C]</b>	210
<b>Specific volume resistance [<math>\Omega</math>cm]</b> VDE 0303, part 3	2xE15
<b>surface resistance [<math>\Omega</math>]</b> VDE 0303, part 3	2xE14
<b>Dielectric strength [kV/mm]</b> DIN IEC 60243-1 at 50 Hz	10
<b>Storage life</b> at approx. +35 °C in unopened original container	4 days
<b>Storage life</b> at room temperature (approx. 23 °C) in unopened original container	4 weeks
<b>Storage life</b> at approx. +5 °C in unopened original container	6 months

## **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 user's responsibility to test the suitability of the product for the intended purpose by considering all specific requirements. Type and 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.

### **Instructions for use**

The instruction for use is available under following address: [www.DELO.de](http://www.DELO.de). If requested we will also be pleased to send it to you.

### **Occupational health and safety**

see material safety data sheet

### **Specification**

see quality assurance test report