DELO

Technical Information

DELOMONOPOX® AD480

Heat curing adhesive, highly viscous

Base

- modified urethane acrylate
- one-component, solvent-free

Use

- for bonding metal elements, e. g., for the magnet system in mobile phone loudspeakers
- the product is normally used in a temperature range of -40 °C to +120 °C; depending on the application, other limits may be more reasonable
- compliant with RoHS directive 2011/65/EU

Processing

- the adhesive is dispensed on one of the two components to be bonded. Then, the second component is joined and fixed until the adhesive has been cured through heat addition
- in case of small components, a thermode (hot stamp) is especially suitable for heat addition
- to heat the components, increased temperatures can be used, as well
- the heating time of the components must be added to the actual curing time
- for curing, the inside of the adhesive layer must have the required temperature
- depending on the adhesive amount used, exothermic reaction heat is developed which can lead to overheating; in this case, the curing temperature must be reduced accordingly
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations

Curing

- curing proceeds at temperatures between +130 and +180 °C in an air convection oven; curing in an air convection oven can lead to a slowing down of the curing process especially with low curing temperature and high aerial oxygen admission at the adhesive (e.g. directly at the fillet, indirectly at the gap or diffusion through thin, permeable components). An increase of the curing temperature counteracts this effect
- fast curing proceeds, e. g., at temperatures between +200 and +250 °C at the adhesive in 10 to 20 seconds using a thermode
- increased temperatures shorten the curing process, lower temperatures extend it, and can change the properties of the cured product

Technical data

Color cured in a layer thickness of approx. 0.1 mm	yellowish
Density [g/cm³] at room temperature (approx. 23 °C)	1.1
Viscosity [mPas] at 23 °C, Brookfield rpm 7/5	80000

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Curing time until final strength [s] rheometer at +130°C	175
Curing time until final strength [s] rheometer at +150 °C	50
Curing time until final strength [s] rheometer at +180°C	35
Tensile shear strength Al/Al [MPa] DIN EN 1465, sand-blasted, component thickness: 1.6 mm Oven curing: 15 min at 130 °C	24
Compression shear strength Al/Al [MPa] DELO Standard 5 curing: 15 min at 130°C	23
Compression shear strength VA/VA [MPa] DELO Standard 5 curing: 15 min at 130 °C	30
Compression shear strength FR4/FR4 [MPa] DELO Standard 5 curing: 15 min at 130 °C	16
Compression shear strength PPS/PPS [MPa] DELO Standard 5 curing: 15 min at 130 °C	7
Tensile strength [MPa] DIN EN ISO 527	18
Elongation at tear [%] DIN EN ISO 527	230
Young's modulus [MPa] DIN EN ISO 527	100
Shore hardness D DIN 53505	35
Glass transition temperature [°C] rheometer	100
Shrinkage [vol. %] DELO Standard 13	5.8
Water absorption [weight %] DIN EN ISO 62	2.0
Storage life at room temperature (max. 25 °C) in unopened original container	6 weeks
Storage life at +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.
Many product properties are subject to temperature and may change permanently, especially at high temperatures.
It is the user's responsibility to test the suitability of the product for the intended purpose and temperature range of use 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 instructions for use of DELOMONOPOX 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.