

DELO DUALBOND® LT2345

modified epoxy resin | 1C | light-fixable / heat-curing

free of solvents | heat curing mandatory, light-fixable, low-temperature-curing, low outgassing, fast fixation

Special features of product

- compliant with RoHS Directive 2015/863/EU
- low-outgassing according to ASTM E 595-93 (also known as NASA outgassing test)
- halogen-free according to IEC 61249-2-21

Function

- electronic adhesive

Typical area of use

- -40 - 180 °C

Curing

Suitable lamp types LED 365 nm, LED 400 nm

Typical light fixation time

*intensity 1,000 mW/cm²
LED 365 nm* 1 - 3 s

Typical curing time

*at +80 °C
in air convection oven* 50 min

*at +100 °C
in air convection oven* 20 min

Processing

Conditioning time (typical)

*when stored in cold conditions
in containers up to 50 ml* 1 h

Processing time

in standard climate +23 °C / 50 % r. h. 72 h

Storage life in unopened original container

at -25 °C to -15 °C 6 month(s)

Technical properties

Color in cured condition in 1 mm layer thickness orange

Transparency in cured condition in 1 mm layer thickness opaque

Parameters

Density 1.52 g/cm³
by the criteria of DIN 66137-2 | liquid

Viscosity 65000 mPa·s
liquid | Rheometer | Shear rate: 10 1/s | Gap: 500 µm

Compression shear strength 60 MPa
*DELO Standard 5 | **AI** | **AI** | Pretreatment: sand-blasted | liquid*

Compression shear strength 52 MPa
*DELO Standard 5 | **Ni** | **Ni** | Pretreatment: Laser | liquid*

Compression shear strength 18 MPa
*DELO Standard 5 | **PA6** | **PA6** | Pretreatment: Annealing | 100 °C | 60 min*

Die shear strength 16 N
*DELO Standard 30 | **Si** | Chip 1 mm x 1 mm | **Au** | 25 mm x 15 mm | 100 °C | 60 min*

Die shear strength 62 N
*DELO Standard 30 | **Si** | Chip 1 mm x 1 mm | **FR4** | 20 mm x 20 mm x 5 mm | Pretreatment: Annealing | 100 °C | 60 min*

Tensile strength 58 MPa
by the criteria of DIN EN ISO 527 | liquid

Elongation at tear 1 %
by the criteria of DIN EN ISO 527 | liquid

Young's modulus 4500 MPa
DMTA | 400 nm | 1000 mW/cm² | 1 s | Plus | 100 °C | 60 min

Shore hardness D 90
by the criteria of DIN EN ISO 868 | 400 nm | 1000 mW/cm² | 1 s | Plus | 100 °C | 60 min

Glass transition temperature 135 °C
DMTA | 400 nm | 1000 mW/cm² | 1 s | Plus | 100 °C | 60 min

Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: -30 °C - 40 °C 400 nm 1000 mW/cm² 1 s Plus 100 °C 60 min</i>	30	ppm/K
Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: 130 °C - 190 °C 400 nm 1000 mW/cm² 1 s Plus 100 °C 60 min</i>	108	ppm/K
Shrinkage <i>DELO Standard 13 400 nm 1000 mW/cm² 1 s Plus 100 °C 60 min</i>	3	vol. %
Water absorption <i>by the criteria of DIN EN ISO 62 Layer thickness: 4 mm 400 nm 1000 mW/cm² 1 s Plus 100 °C 60 min Type of storage: Media Medium: Distilled water Storage temperature: at approx. +23 °C Duration: 24 h</i>	0.1	wt. %

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. The heating time of the components must be added to the actual curing time. It depends on component size and type of heat input. The specified curing temperature must be reached directly at the adhesive. Increasing or decreasing the curing temperature and / or irradiation intensity and / or irradiation time shortens or prolongs the curing time and can lead to changed physical properties. Depending on the adhesive quantity used, exothermic reaction heat is generated which can lead to overheating. In this case, a lower curing temperature is to be selected. All curing or light fixation parameters depend on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer. Optional prefixation is performed with light. Heat curing is mandatory. 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.

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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

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