

DELO DUALBOND® LT2266

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

free of solvents, free of antimony | low-temperature-curing from + 60 °C, heat curing mandatory, light-fixable, tension-equalizing, flow-resistant, filled, light-blocking, thixotropic

Special features of product

- compliant with RoHS Directive 2015/863/EU
- compliant with limits of VOC content in adhesive acc. to GB33372-2020
- tested for biocompatibility and meets the requirements according to DIN EN ISO 10993-5: test for cytotoxicity

Function

- electronic adhesive

Typical area of use

- -40 - 150 °C
- active alignment for camera modules
- chip bonding
- glass/metal bondings
- mixed bondings with plastics
- fast component fixation
- sensor bonding
- bonding of temperature-sensitive substrates
- bonding of opaque components

Curing

Suitable lamp types LED 365 nm, LED 400 nm

Typical light fixation time

| | | |
|---|---|---|
| <i>intensity 1,000 mW/cm² LED 365 nm</i> | 1 | s |
|---|---|---|

Typical curing time

| | | |
|---|----|-----|
| <i>at +60 °C light-fixed / in air convection oven</i> | 90 | min |
|---|----|-----|

| | | |
|---|-----|-----|
| <i>at +60 °C in air convection oven</i> | 120 | min |
|---|-----|-----|

| | | |
|---|----|-----|
| <i>at +80 °C light-fixed / in air convection oven</i> | 30 | min |
|---|----|-----|

| | | |
|---|----|-----|
| <i>at +80 °C in air convection oven</i> | 60 | min |
|---|----|-----|

Processing

Typical adhesive application jetting, needle dispensing

Conditioning time (typical)

in containers up to 50 ml 1 h

Processing time

*in standard climate +23 °C / 50 % r. h.
in containers up to 50 ml* 3 d

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 black

Transparency in cured condition in 1 mm layer thickness opaque

Filler particle type minerals

Parameters

Density 1.32 g/cm³
by the criteria of DIN 66137-2 | liquid

Viscosity 53000 mPa·s
liquid | Rheometer | Shear rate: 10 1/s | Gap: 500 µm

Thixotropy index 7.5
liquid | Rheometer | Gap: 500 µm

Compression shear strength 24 MPa
*DELO Standard 5 | **AI** | **AI** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min*

Compression shear strength 14 MPa
*DELO Standard 5 | **LCP MR25** | **LCP MR25** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min*

Compression shear strength 20 MPa
*DELO Standard 5 | **Ni** | **Ni** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min*

Compression shear strength 21 MPa
*DELO Standard 5 | **PA11T** | **PA11T** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min*

Compression shear strength 30 MPa
DELO Standard 5 | PC | PC | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Tensile strength 20 MPa
by the criteria of DIN EN ISO 527 | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Elongation at tear 110 %
by the criteria of DIN EN ISO 527 | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Young's modulus 1100 MPa
DMTA | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Shore hardness D 67
by the criteria of DIN EN ISO 868 | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Glass transition temperature 35 °C
DMTA | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Coefficient of linear expansion 60 ppm/K
DELO Standard 26 | TMA | Evaluation T: -40 °C - 5 °C | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Coefficient of linear expansion 162 ppm/K
DELO Standard 26 | TMA | Evaluation T: 50 °C - 160 °C | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Water absorption 0.12 wt. %
by the criteria of DIN EN ISO 62 | Layer thickness: 4 mm | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

Extractable ions < 5 ppm
Ion: Bromide

Extractable ions < 5 ppm
Ion: Chloride

Extractable ions < 5 ppm
Ion: Fluoride

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 pre-fixation 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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CONTACT

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