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

<table>
<thead>
<tr>
<th>intensity 1,000 mW/cm²</th>
<th>1 s</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED 365 nm</td>
<td></td>
</tr>
</tbody>
</table>

Typical curing time

<table>
<thead>
<tr>
<th>temperature</th>
<th>curing time</th>
</tr>
</thead>
<tbody>
<tr>
<td>at +60 °C light-fixed / in air convection oven</td>
<td>90 min</td>
</tr>
<tr>
<td>at +60 °C in air convection oven</td>
<td>120 min</td>
</tr>
<tr>
<td>at +80 °C light-fixed / in air convection oven</td>
<td>30 min</td>
</tr>
<tr>
<td>at +80 °C in air convection oven</td>
<td>60 min</td>
</tr>
</tbody>
</table>
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  
by the criteria of DIN 66137-2 | liquid

1.32 g/cm³

Viscosity

liquid | Rheometer | Shear rate: 10 1/s | Gap: 500 µm

50000 mPa·s

Thixotropy index

liquid | Rheometer | Gap: 500 µm

7.9

Compression shear strength

DELO Standard 5 | **Al** | **Al** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

24 MPa

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

14 MPa

DELO Standard 5 | **Ni** | **Ni** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

20 MPa

DELO Standard 5 | **PA** | **PA** | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min

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

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

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

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

Shore hardness D  
by the criteria of DIN EN ISO 888 | 365 nm | 200 mW/cm² | 5 s | Plus | 80 °C | 60 min
| 67 |

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

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

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

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

Extractable ions  
Ion: Bromide
| < 5 | ppm

Extractable ions  
Ion: Chloride
| < 5 | ppm

Extractable ions  
Ion: Fluoride
| < 5 | ppm

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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