DELO DUALBOND® AD465

modified acrylate | 1C | UV- / VIS- / heat-curing
free of solvents | filled | dual-curing

Special features of product
- compliant with RoHS Directive 2015/863/EU

Function
- electronic adhesive

Typical area of use
- -40 - 120 °C
- pin potting
- pin sealing

Curing

Suitable lamp types
- LED 365 nm, LED 400 nm, UVA

Typical irradiation time

<table>
<thead>
<tr>
<th>intensity</th>
<th>time (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 - 60 mW/cm² UVA</td>
<td>4</td>
</tr>
<tr>
<td>200 mW/cm² LED 400 nm</td>
<td>2</td>
</tr>
</tbody>
</table>

Typical curing time

<table>
<thead>
<tr>
<th>temperature</th>
<th>time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>at +110 °C in air convection oven</td>
<td>5</td>
</tr>
<tr>
<td>at +130 °C in air convection oven</td>
<td>3</td>
</tr>
</tbody>
</table>

Processing

Conditioning time (typical)

<table>
<thead>
<tr>
<th>condition</th>
<th>time (min/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>when stored in cold conditions in containers up to 50 ml</td>
<td>30</td>
</tr>
<tr>
<td>when stored in cold conditions in containers up to 1,000 ml</td>
<td>4</td>
</tr>
</tbody>
</table>
Processing time

- at rt approx. +23 °C
  - in containers up to 50 ml: 14 d
  - in containers up to 170 ml: 5 d
  - in containers up to 900 ml: 24 h

Storage life in unopened original container

- at 0 °C to +10 °C: 6 month(s)

Technical properties

- Color in uncured condition: red
- Color in cured condition in 0.1 mm layer thickness: red
- Fluorescence: fluorescent

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>1.05 g/cm³</td>
</tr>
<tr>
<td>Viscosity, liquid</td>
<td>Rheometer</td>
</tr>
<tr>
<td>Viscosity, liquid</td>
<td>Rheometer</td>
</tr>
<tr>
<td>Compression shear strength, Glass</td>
<td>14 MPa</td>
</tr>
<tr>
<td>Compression shear strength, Stainless steel</td>
<td>19 MPa</td>
</tr>
<tr>
<td>Compression shear strength, Al</td>
<td>22 MPa</td>
</tr>
<tr>
<td>Compression shear strength, Glass</td>
<td>22 MPa</td>
</tr>
</tbody>
</table>
Compression shear strength
DELO Standard 5 | Glass | FR4 | 60 mW/cm² | 60 s
| 21 | MPa |

Compression shear strength
DELO Standard 5 | Glass | PBT | 60 mW/cm² | 60 s
| 5 | MPa |

Tensile strength
Based on DIN EN ISO 527 | 60 mW/cm² | 90 s
| 17 | MPa |

Elongation at tear
Based on DIN EN ISO 527 | 60 mW/cm² | 90 s
| 220 | % |

Young’s modulus
Based on DIN EN ISO 527 | 60 mW/cm² | 90 s
| 320 | MPa |

Shore hardness D
Based on DIN EN ISO 868 | 60 mW/cm² | 90 s
| 50 | |

Glass transition temperature
DELO Standard 24 | liquid | Rheometer
| 100 | °C |

Shrinkage
DELO Standard 13 | 60 mW/cm² | 90 s
| 5.6 | vol. % |

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.
All curing or light fixation parameters depend on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer.
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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All products provided by DELO are subject to DELO’s General Terms of Business. Verbal ancillary agreements are deemed not to exist.

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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