**DELO® KATIOBOND® 45952**

**modified epoxy resin | 1C | preactivated**

free of solvents | unfilled, thixotropic | electrically insulating, tension-equalizing, preactivated

**Special features of product**
- halogen-free according to IEC 61249-2-21
- compliant with RoHS Directive 2015/863/EU
- passes ANSI/UL 94 HB Flame Test

**Function**
- sealant

**Typical area of use**
- -40 - 150 °C
- pin sealing

**Curing**

| Suitable lamp types | LED 365 nm, LED 400 nm, LED 460 nm, UVA |

**Typical preactivation time**

- *intensity 200 mW/cm²*  
  - LED 460 nm  
  - **8 s**

**Typical open time**

- *intensity 200 mW/cm²*  
  - LED 460 nm  
  - **15 - 18 s**

**Typical irradiation time**

- *intensity 200 mW/cm²*  
  - LED 400 nm  
  - **30 - 60 s**

**Processing**

**Typical adhesive application**
- needle dispensing, jetting

**Storage life in unopened original container**

- *at 0 °C to +25 °C*  
  - **6 month(s)**
Storage life in unopened original container as from production date

| at 0 °C to +25 °C | 6 month(s) |

**Technical properties**

Color in cured condition in 0.1 mm layer thickness

Color: yellow

Transparency in cured condition in 0.1 mm layer thickness

Transparency: transparent

Fluorescence

Fluorescence: fluorescent

**Parameters**

**Density**

Density: 1.15 g/cm³

Based on DIN EN ISO 2811-3 | Liquid

**Viscosity**

Viscosity: 6300 mPa·s

Liquid | Rheometer | Shear rate: 10 1/s

**Thixotropy index**

Thixotropy index: 2.8

Liquid | Rheometer

**Maximum layer thickness that can be preactivated**

Maximum layer thickness: ≥4 mm

DELO Standard 21 | 460 nm | 200 mW/cm² | 8 s | Plus | 24 h

**Compression shear strength**

9 MPa

DELO Standard 5 | PMMA | PMMA | 460 nm | 200 mW/cm² | 9 s | Plus | 24 h

15 MPa

DELO Standard 5 | PC | PC | 400 nm | 200 mW/cm² | 60 s | Plus | 24 h

10 MPa

DELO Standard 5 | PC | Al | 400 nm | 200 mW/cm² | 60 s | Plus | 24 h

7 MPa

DELO Standard 5 | Glass | PBT | 400 nm | 200 mW/cm² | 60 s | Plus | 24 h

6 MPa

DELO Standard 5 | Glass | LCP E130i | 400 nm | 200 mW/cm² | 60 s | Plus | 24 h

>20 MPa

DELO Standard 5 | Glass | Glass | 400 nm | 200 mW/cm² | 60 s | Plus | 24 h
### Compression Shear Strength

**DELO Standard 5**

<table>
<thead>
<tr>
<th>Material</th>
<th>Glass</th>
<th>FR4</th>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength</td>
<td>&gt;20 MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Al</th>
<th>Al</th>
<th>Pretreatment: Laser</th>
<th>460 nm</th>
<th>200 mW/cm²</th>
<th>8 s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength</td>
<td>27 MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tensile Strength

Based on DIN EN ISO 527

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength</td>
<td>30 MPa</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Elongation at Tear

Based on DIN EN ISO 527

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Young’s Modulus

DMTA

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
<th>Type of storage: Temp.</th>
<th>Temp.: 205 °C</th>
<th>Duration: 30 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulus</td>
<td>1100 MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Shore Hardness D

Based on DIN EN ISO 868

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shore hardness</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Glass Transition Temperature

DMTA

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
<th>Type of storage: Temp.</th>
<th>Temp.: 205 °C</th>
<th>Duration: 30 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>39 °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Shrinkage

**DELO Standard 13**

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrinkage</td>
<td>3.7 vol. %</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Water Absorption

Based on DIN EN ISO 62

<table>
<thead>
<tr>
<th>400 nm</th>
<th>200 mW/cm²</th>
<th>60 s</th>
<th>Plus</th>
<th>24 h</th>
<th>Type of storage: Media</th>
<th>Medium: Distilled water</th>
<th>Duration: 24 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption</td>
<td>2.1 wt. %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Decomposition Temperature

**DELO Standard 36**

| | 220 °C |

---

### 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. 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. A short irradiation time (preactivation time) results in an open time within which opaque components can be joined. The cationic curing mechanism enables the adhesive to cure on opaque components after joining by sufficient preactivation. All curing or light fixation parameters depend on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer. Curing until final strength proceeds within 24 hours at room temperature. High temperatures during or after curing can lead to post-crosslinking of the adhesive which influences the physical properties of the bond. 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. Nothing contained herein shall be construed to indicate the non-existence of any relevant patents or to constitute a permission, encouragement or recommendation to practice any development covered by any patents, without permission of the owner of this patent. 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

Nothing contained in this Technical Datasheet shall be interpreted as any express warranty or guarantee. This Technical Datasheet is for reference only and does not constitute a product specification. Please ask our responsible Sales Engineer for the applicable product specification which includes defined ranges. DELO is neither liable for any values and content of this Technical Datasheet nor for oral or written recommendations regarding the use, unless otherwise agreed in writing. This limitation of liability is not applicable for damages resulting from intent, gross negligence or culpable breach of cardinal obligations, nor shall it apply in case of death or personal injury or in case of liability under any applicable compulsory law.