

### **DELO-DUALBOND® AD465**

light and heat curing adhesive, medium viscosity

#### **Base**

- modified urethane acrylate
- one-component, solvent-free

#### **Use**

- dualcuring adhesive for electronic applications: pin casting, pin sealing
- the product is normally used in a temperature range of -40 °C to +120 °C; depending on the application, other limits may be more reasonable

#### **Processing**

- the adhesive is supplied ready for use; in case of cool or refrigerated storage, it must be ensured that the container is conditioned to room temperature before use
- the containers are conditioned at room temperature (max. 25 °C); the conditioning time is approx. 0.5 h for containers up to 50 ml and approx. 4 h for containers up to 1,000 ml; additional heat addition is not allowed
- the adhesive is usually applied by dispensing
- the adhesive can be processed well from the original container or with DELO dispensing units
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations
- use DELOTHEN cleaners for the cleaning of bonding surfaces

#### **Curing**

- curing with UV light and visible light in a wavelength range of 320 - 420 nm
- in shadowed areas, the product can be cured with heat
- the light-curing mechanism and the heat-curing mechanism can be used independently
- the product was designed for curing with light in seconds; shadowed areas can be cured with heat

#### **Curing parameters**

- in case of light curing dependent on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer
- for the heat curing of shadowed areas a temperature of +130 °C and a curing time of 3 min can be preferably applied
- the minimal curing temperature is +110 °C at a curing time of 5 min
- the heating time of the components must be added to the curing time
- the heating time should not exceed 15 min

#### **Technical data**

Color

cured in a layer thickness of approx. 0.1 mm

red fluorescent

Density [g/cm<sup>3</sup>]

at room temperature (approx. 23 °C)

1.1

**DELO** Industrial Adhesives  
DELO-Allee 1  
86949 Windach · Germany  
Phone +49 8193 9900-0  
Fax +49 8193 9900-144  
info@DELO.de · www.DELO.de

<b>Viscosity [mPas]</b> at 23 °C, Brookfield rpm 4/5	24000
<b>Processing time</b> at room temperature (max. 25 °C)	2 weeks
<b>Minimal curing time [s]</b> DELO Standard 23, UVA intensity: 60 mW/cm <sup>2</sup> , DELOLUXcontrol	4
<b>Surface after curing</b>	dry
<b>Compression shear strength glass/glass [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	23
<b>Compression shear strength glass/Al [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	22
<b>Compression shear strength glass/VA [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	19
<b>Compression shear strength glass/PA [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	14
<b>Compression shear strength glass/PBT [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> ; DELOLUXcontrol, irradiation time: 60 s	5
<b>Compression shear strength glass/FR4 [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	21
<b>Tensile strength [MPa]</b> DIN EN ISO 527	17
<b>Elongation at tear [%]</b> DIN EN ISO 527	220
<b>Young's modulus [MPa]</b> DIN EN ISO 527	320
<b>Shore hardness D</b> according to DIN EN ISO 868	50
<b>Glass transition temperature [°C]</b> rheometer	100
<b>Shrinkage [vol. %]</b> DELO Standard 13	5.6
<b>Water absorption [weight %]</b> according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	1.2
<b>Storage life at +5 °C</b> in unopened original container	6 months

## **Instructions and advice**

### **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.

Many product properties are subject to temperature and may change permanently, especially at high temperatures.

It is the user's responsibility to test the suitability of the product for the intended purpose and temperature range of use by considering all specific requirements. Type and 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.

### **Instructions for use**

The instructions for use of DELO-DUALBOND are available on: [www.DELO.de](http://www.DELO.de). We will be pleased to send them to you on demand.

### **Occupational health and safety**

see material safety data sheet

### **Specification**

see quality assurance test report