

### **DELO-PHOTOBOND® 4442**

UV- and light curing acrylate adhesive, low viscosity

#### **Use**

- for elastic coatings, as sealant and adhesive for foils, bonding of membranes and coils in loudspeakers
- suitable for electronic applications due to its low corrosion potential
- well suitable for plastics sensitive to stress cracking
- permanently elastic, even at low temperatures down to -40°C
- tested for biocompatibility and meets the requirements according to USP 23, 1995, for Class VI Plastics -70 °C
- 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

#### **Base**

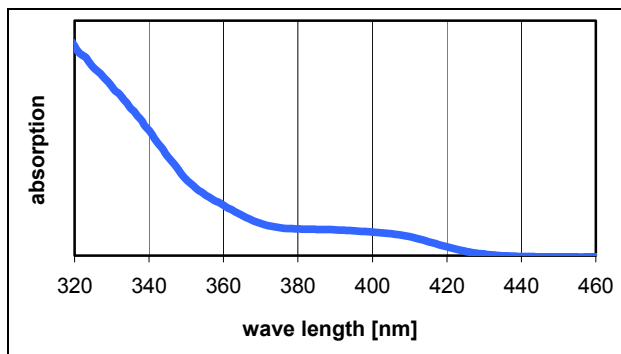
- modified acrylate
- one-component, solvent-free

#### **Curing**

- with visible light or UV light in a wavelength range of 320 - 450 nm

#### **Absorption spectrum**

photoinitiation system in acrylate matrix



#### **Curing parameters**

- dependent on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer

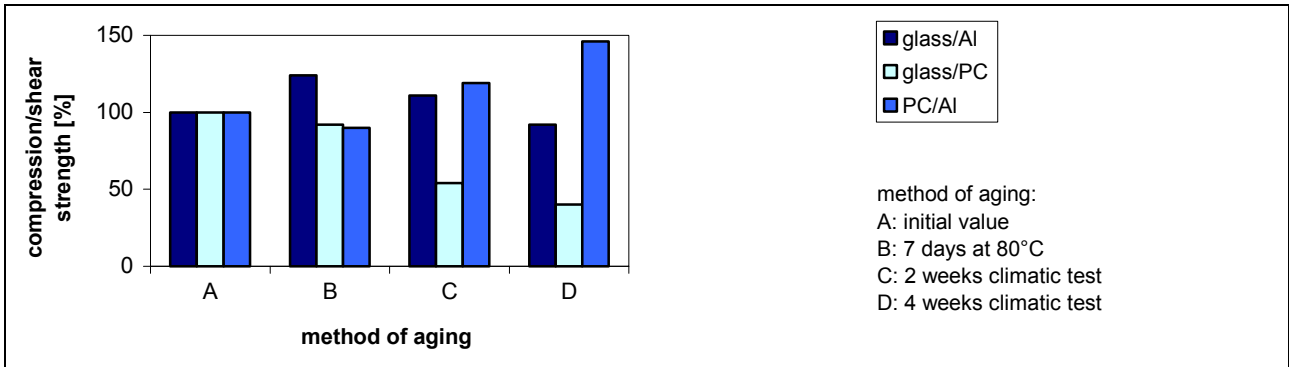
## **Processing**

- supplied ready for use and 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
- use DELOTHEN EP cleaner for the cleaning of glass
- for further information please refer to the instructions for use

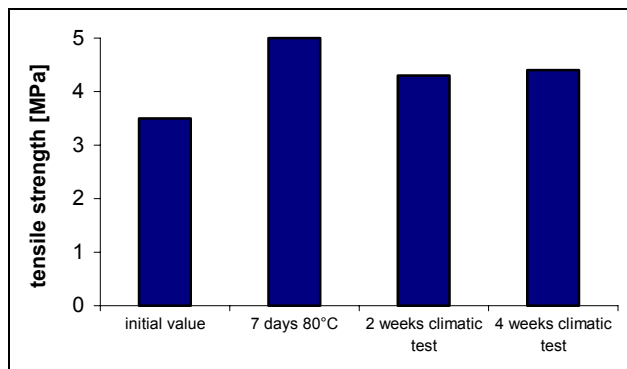
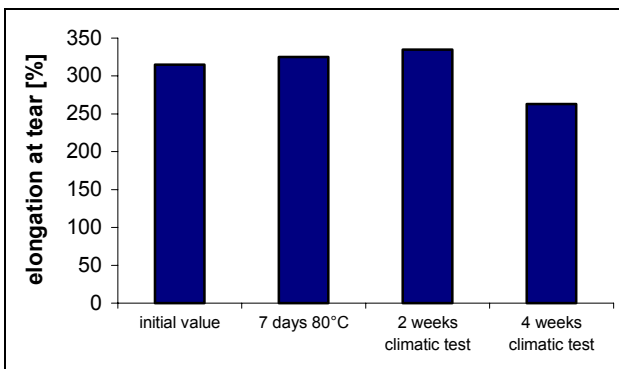
## **Technical data**

<b>Color</b> cured in a layer thickness of approx. 0.1 mm	colorless clear
<b>Density [g/cm<sup>3</sup>]</b> at room temperature (approx. 23 °C)	1.0
<b>Viscosity [mPas]</b> at 23 °C, Brookfield rpm 3/100	650
<b>Minimal curing time [s]</b> DELO Standard 23, UVA intensity: 60 mW/cm <sup>2</sup> , DELOLUXcontrol	60
<b>Surface</b>	tacky
<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	4
<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	4
<b>Compression shear strength glass/PC [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/PMMA [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	3
<b>Compression shear strength PC/Al [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	2
<b>Compression shear strength PC/PC [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	6
<b>Compression shear strength PMMA/PMMA [MPa]</b> DELO Standard 5 UVA intensity: 55 - 60 mW/cm <sup>2</sup> , DELOLUXcontrol, irradiation time: 60 s	2
<b>Tensile strength [MPa]</b> DIN EN ISO 527	3
<b>Elongation at tear [%]</b> DIN EN ISO 527	300

**Compression shear strength**  
after aging



**Material properties**  
after aging



**Shore hardness A**  
DIN 53505

30

**Glass transition temperature [°C]**  
rheometer

18

**Coefficient of linear expansion [ppm/K]**  
in a temperature range of +25 to +140 °C

254

**Shrinkage [vol. %]**  
DELO Standard 13

6

**Water absorption [weight %]**  
DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)

0.6

**Index of refraction**

1.5

**Creep resistance CTI**  
VDE 0303, part 1, IEC 112

600 M

**Storage life**  
at room temperature (max. 25 °C) in unopened original container

3 months

**Storage life**  
at approx. +5 °C 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-PHOTOBOND 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