DELO

Technical Information

DELO-PHOTOBOND® 4496

UV- and light curing acrylate adhesive, medium viscosity

Use

- optimal peel resistance due to its flexibility, e. g., for the fixing of coil wires to loudspeaker membranes
- adjusted flow behavior for reproducible casting geometries
- reliable sealing, even during extreme temperature changes
- tested for biocompatibility and meets the requirements according to ISO 10993-5: Test for cytotoxicity
- 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

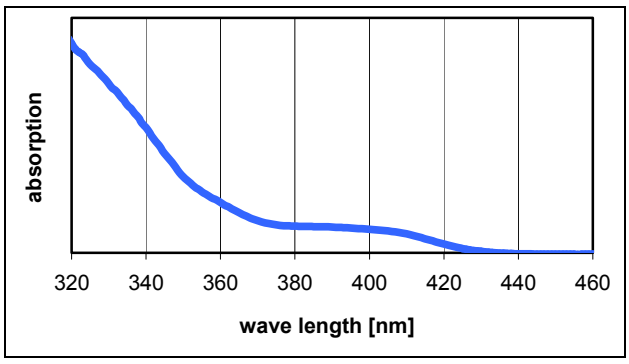
- modified acrylate
- one-component, solvent-free

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

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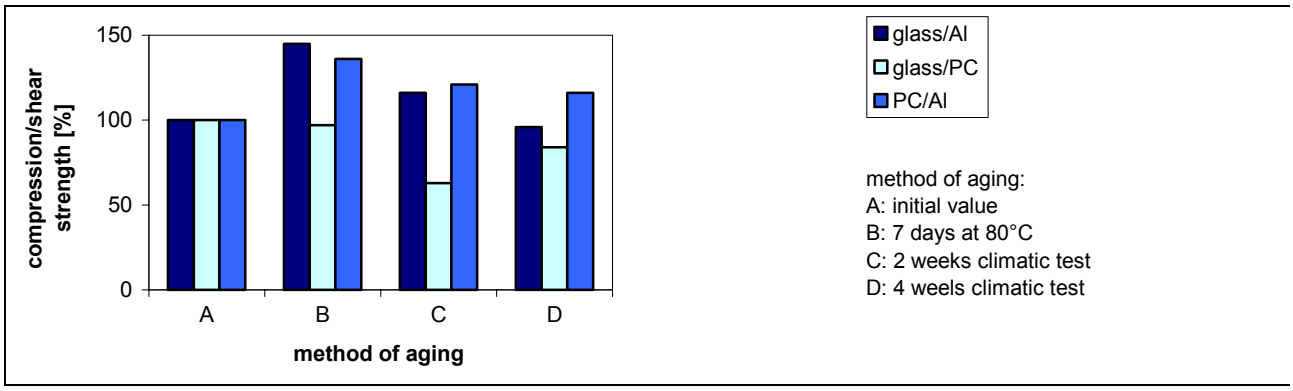
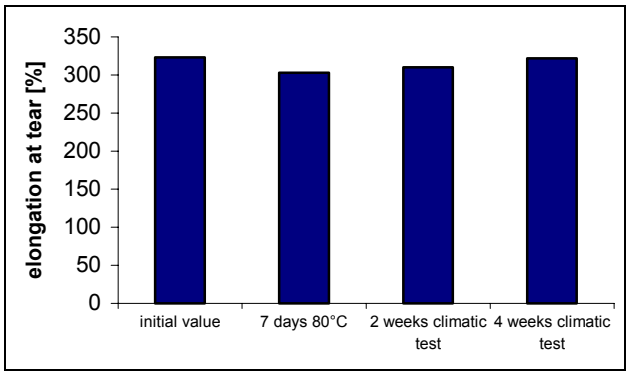
Technical data

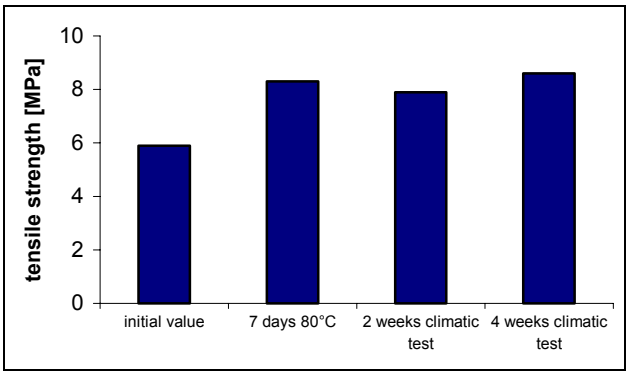
Color cured in a layer thickness of approx. 0.1 mm	yellowish clear
Density [g/cm³] at room temperature (approx. 23 °C)	1.1
Viscosity [mPas] at 23 °C, Brookfield rpm 4/5	17000
Minimal curing time [s] DELO Standard 23, UVA intensity: 60 mW/cm², DELOLUXcontrol	50
Surface	tacky
Compression shear strength glass/glass [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	6
Compression shear strength glass/Al [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	4
Compression shear strength glass/PC [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	5
Compression shear strength glass/PMMA [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	4
Compression shear strength PC/Al [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	5
Compression shear strength PC/PC [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	10
Compression shear strength PMMA/PMMA [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm², DELOLUXcontrol, irradiation time: 60 s	3
Peel resistance [N/cm] DELO Standard 34; PC/PC foil	22
Peel resistance [N/cm] DELO Standard 34; PAR/PAR foil	11
Tensile strength [MPa] DIN EN ISO 527	6
Elongation at tear [%] DIN EN ISO 527	300

Compression shear strength
after aging



Material properties
after aging





Shore hardness A DIN 53505	35
Glass transition temperature [°C] rheometer	21
Coefficient of linear expansion [ppm/K] in a temperature range of +23 to +150 °C	239
Shrinkage [vol. %] DELO Standard 13	6
Water absorption [weight %] DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	0.7
Index of refraction	1.498
Dielectric constant RF-IV method, 1 MHz	4.0
Dielectric constant RF-IV method, 10 MHz	4.0
Dielectric constant RF-IV method, 100 MHz	3.8
Dielectric constant RF-IV method, 1 GHz	3.2
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. 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