

# DELO<sup>®</sup> PHOTOBOND<sup>®</sup> 4494

**modified acrylate | 1C | UV- / VIS-curing**

free of solvents | thixotropic, unfilled

### Special features of product

- compliant with RoHS Directive 2015/863/EU

### Typical area of use

- 40 - 120 °C

### Curing

Suitable lamp types LED 365 nm, LED 400 nm

Typical irradiation time

*intensity 200 mW/cm<sup>2</sup>* 3 s  
*LED 400 nm*

### Processing

Processing time

*tumble before processing for 3 h | 1 – 2 1/min | conditioned containers* 28 d  
*in containers up to 1,000 ml*

Storage life in unopened original container

*at +18 °C to +25 °C* 9 month(s)

### Technical properties

Color in uncured condition colorless

Color in cured condition in 0.1 mm layer thickness colorless

Color in cured condition in 1 mm layer thickness colorless

### Parameters

Density 1.0 g/cm<sup>3</sup>  
*liquid*

Viscosity 20000 mPa·s  
*by the criteria of DIN 53019 | liquid | Rheometer | Shear rate: 2 1/s | Gap: 500 µm*

Compression shear strength <i>DELO Standard 5   <b>Glass   AI</b>   60 mW/cm<sup>2</sup>   60 s</i>	25	MPa
Compression shear strength <i>DELO Standard 5   <b>Glass   Glass</b>   60 mW/cm<sup>2</sup>   60 s</i>	28	MPa
Compression shear strength <i>DELO Standard 5   <b>PC   AI</b>   60 mW/cm<sup>2</sup>   60 s</i>	5	MPa
Compression shear strength <i>DELO Standard 5   <b>PC   Glass</b>   60 mW/cm<sup>2</sup>   60 s</i>	17	MPa
Compression shear strength <i>DELO Standard 5   <b>PC   PC</b>   60 mW/cm<sup>2</sup>   60 s</i>	18	MPa
Compression shear strength <i>DELO Standard 5   <b>PMMA   Glass</b>   60 mW/cm<sup>2</sup>   60 s</i>	4	MPa
Compression shear strength <i>DELO Standard 5   <b>PMMA   PMMA</b>   60 mW/cm<sup>2</sup>   60 s</i>	10	MPa
Tensile strength <i>by the criteria of DIN EN ISO 527   60 mW/cm<sup>2</sup>   90 s</i>	20	MPa
Elongation at tear <i>by the criteria of DIN EN ISO 527   60 mW/cm<sup>2</sup>   90 s</i>	160	%
Young's modulus <i>by the criteria of DIN EN ISO 527   60 mW/cm<sup>2</sup>   90 s</i>	400	MPa
Shore hardness D <i>by the criteria of DIN EN ISO 868   60 mW/cm<sup>2</sup>   90 s</i>	62	
Glass transition temperature <i>DELO Standard 24   Rheometer</i>	100	°C
Coefficient of linear expansion <i>TMA   Evaluation T: 25 °C - 140 °C</i>	211	ppm/K
Shrinkage <i>DELO Standard 13</i>	9	vol. %
Water absorption <i>by the criteria of DIN EN ISO 62   60 mW/cm<sup>2</sup>   90 s   Type of storage: Media   Medium: Distilled water   Storage temperature: at approx. +23 °C</i>	1.3	wt. %
Index of refraction <i>Refractometer   liquid</i>	1.503	

Decomposition temperature 182 °C  
*DELO Standard 36*

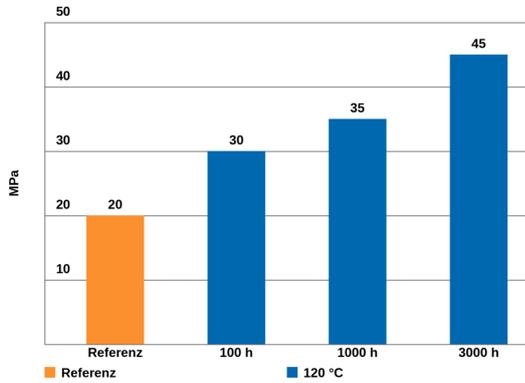
Relative permittivity 3.0  
*by the criteria of RF-IV | 1 GHz*

Relative permittivity 3.4  
*by the criteria of RF-IV | 1 MHz*

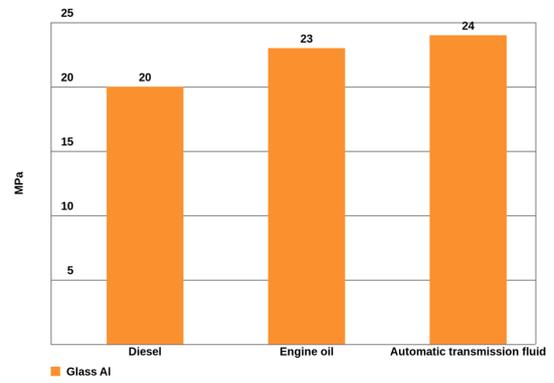
Relative permittivity 3.4  
*by the criteria of RF-IV | 10 MHz*

Relative permittivity 3.4  
*by the criteria of RF-IV | 100 MHz*

Tensile strength after temperature storage, by the criteria of DIN EN ISO 527

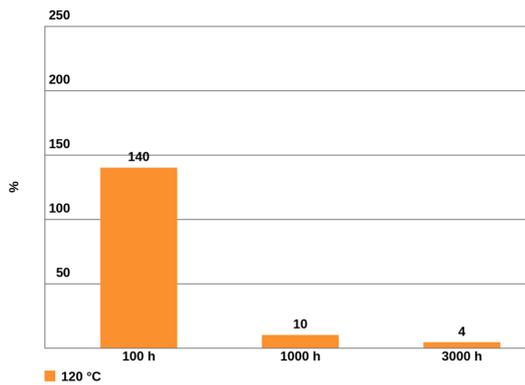


Compression shear strength after media storage for 1000 h

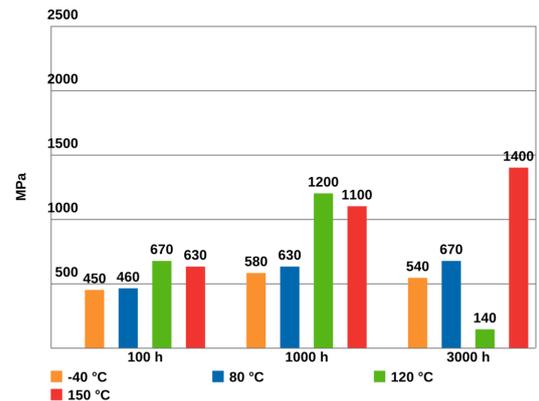


DELO Standard 5

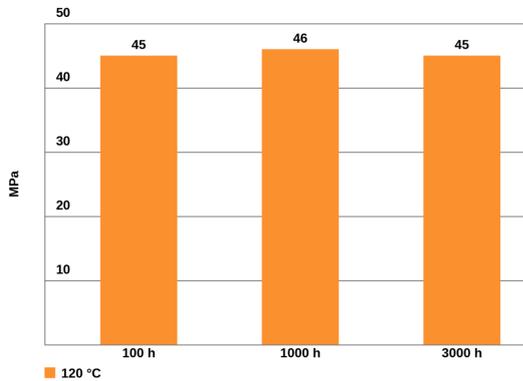
Elongation at tear after temperature storage, by the criteria of DIN EN ISO 527



Young's modulus after thermal storage  
 Curing 60 mW/cm<sup>2</sup> /



Compression shear strength after temperature storage  
Substrates: glass/ glass, by the criteria of DELO Standard 5



### 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 adhesive can be tumbled during conditioning if necessary, depending on the chemical basis and container size. After tumbling, a waiting time of 1 – 2 h must be maintained to enable air bubbles to escape. Alternatively, a pressure tank with integrated stirring element can be used to keep the material continuously homogeneous.

The viscosity may decrease during tumbling. Cartridges are excluded from tumbling.

Further information can be found in the instructions for use. 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. 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.

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](http://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.

## **CONTACT**

DELO PHOTOBOND 4494 | as of 12.01.2023 09:06 | Page 5 of 5

**DELO** Industrial Adhesives  
Headquarters

▶ Germany · Windach / Munich ... [www.DELO-adhesives.com](http://www.DELO-adhesives.com)

ADHESIVES

DISPENSING

CURING

CONSULTING

**DELO**