

# DELO<sup>®</sup> PHOTOBOND<sup>®</sup> LA4878

**modified urethane polymer | 1C | humidity-curing after preactivation**

free of solvents | humidity-resistant, tension-equalizing, preactivated, unfilled

### Special features of product

- compliant with RoHS Directive 2015/863/EU
- compliant with limits of VOC content in adhesive acc. to GB33372-2020

### Typical area of use

- -40 - 120 °C
- glass/metal bondings
- bonding of temperature-sensitive substrates
- bonding of opaque components

### Curing

Suitable lamp types LED 400 nm, LED 460 nm

Typical preactivation time

*intensity 300 mW/cm<sup>2</sup>  
LED 400 nm* 6 s

*intensity 400 mW/cm<sup>2</sup>  
LED 460 nm* 6 s

### Processing

Conditioning time (typical)

*when stored in cold conditions  
in containers up to 50 ml* 30 min

*when stored in cold conditions  
in containers up to 600 ml* 5 h

Processing time

*at rt approx. +23 °C  
in containers up to 600 ml* 14 d

Storage life in unopened original container

*at 0 °C to +10 °C* 6 month(s)

### Technical properties

Color in cured condition in 0.1 mm layer thickness colorless

Transparency in cured condition in 0.1 mm layer thickness transparent

Color in cured condition in 1 mm layer thickness	colorless
Transparency in cured condition in 1 mm layer thickness	transparent

**Parameters**

Density <i>by the criteria of DIN 66137-2   liquid</i>	1.13	g/cm <sup>3</sup>
Viscosity <i>liquid   Rheometer   Shear rate: 2 1/s   Gap: 500 µm</i>	100000	mPa·s
Maximum curable layer thickness <i>Preactivation   400 nm   300 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	2.5	mm
Maximum curable layer thickness <i>Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	4	mm
Open time after preactivation <i>Preactivation   400 nm   300 mW/cm<sup>2</sup>   6 s</i>	17	s
Open time after preactivation <i>Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s</i>	34	s
Compression shear strength <i>DELO Standard 5   <b>Glass   Al, anodized</b>   Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	4	MPa
Compression shear strength <i>DELO Standard 5   <b>Glass   Glass</b>   Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	4	MPa
Compression shear strength <i>DELO Standard 5   <b>Glass   PA6</b>   Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	4	MPa
Compression shear strength <i>DELO Standard 5   <b>PC   PC</b>   Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	5	MPa
Compression shear strength <i>DELO Standard 5   <b>PC-ABS   PC-ABS</b>   Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	3	MPa
Compression shear strength <i>DELO Standard 5   <b>PMMA   PMMA</b>   Preactivation   460 nm   400 mW/cm<sup>2</sup>   6 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h</i>	5	MPa

Tensile strength 3 MPa  
*by the criteria of DIN EN ISO 527 | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Elongation at tear 500 %  
*by the criteria of DIN EN ISO 527 | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Young's modulus < 10 MPa  
*DMTA | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Shore hardness 00 60  
*by the criteria of DIN EN ISO 868 | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Shore hardness A 16  
*by the criteria of DIN EN ISO 868 | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Glass transition temperature -60 °C  
*DMTA | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Coefficient of linear expansion 265 ppm/K  
*DELO Standard 26 | TMA | Evaluation T: -25 °C - 150 °C | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Shrinkage 2.3 vol. %  
*DELO Standard 13 | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h*

Water absorption 1.7 wt. %  
*by the criteria of DIN EN ISO 62 | Layer thickness: 4 mm | Preactivation | 460 nm | 400 mW/cm<sup>2</sup> | 60 s | Plus | at approx. +23 °C | Rel. air humidity: 50 % | 168 h | Type of storage: Media | Medium: Distilled water | Duration: 24 h*

**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 product cures completely after preactivation by humidity at room temperature. Air humidity is mandatory for curing. 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 LA4878 | as of 06.03.2024 13:17 | Page 4 of 4

**DELO** Industrial Adhesives  
Headquarters

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

ADHESIVES

DISPENSING

CURING

CONSULTING

**DELO**