

DELO-PHOTOBOND® LP424

UV- and light curing adhesive with high barrier function against water vapour

Base

- modified acrylate
- one-component, solvent-free

Use

- due to the high permeation resistance against water vapor, the product is especially suitable for the sealing of sensitive components, e. g. flexible photovoltaic cells, E-Paper, barrier films
- very low water absorption
- for edge sealing and flat bonding
- for the bonding of glass, ITO-coated glass and other materials
- the cured product is normally used in a temperature range of -40 °C to +120 °C; depending on the application, other limits may be more reasonable
- compliant with RoHS directive 2015/863/EU
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Processing

- the adhesive is supplied ready for use; in case of cool storage, it must be ensured that the container is conditioned to room temperature before use
- the containers are conditioned at room temperature (+18 °C to +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 can be applied by dispensing
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations
- dispensing valves and product-bearing elements must be carefully cleaned before use, residues of other products must be completely removed; DELOTHEN EP as well as acetone, isopropanol or a mixture of both are recommended to remove DELO-PHOTOBOND residues
- for further information please refer to our instructions for use DELO-PHOTOBOND and the brochure "Light Curing"

Curing

- with UV light or visible light in a wavelength range of 320 - 420 nm

Lamp type	DELOLUX 20 / 50 / 80		
Wavelength [nm]	365	400	460
Suitability	+	++	-

- not suitable + suitable ++ especially suitable

Curing parameters

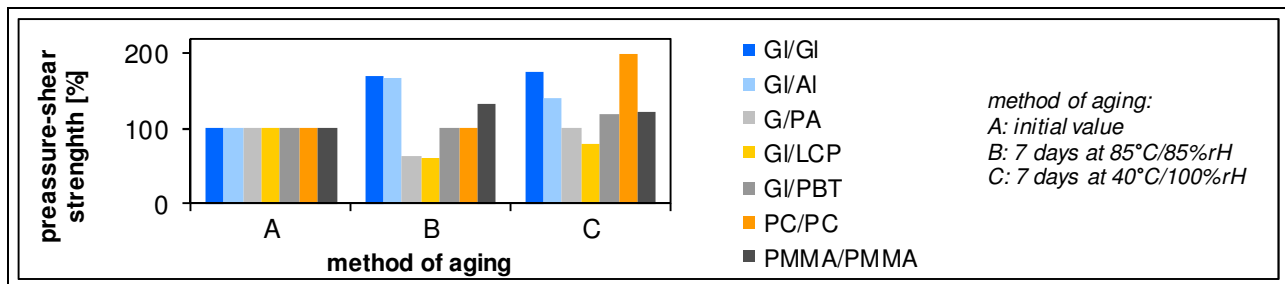
- dependent on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer

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

Technical data

Color cured in a layer thickness of approx. 0.1 mm	colorless clear
Density [g/cm³] at room temperature (approx. 23 °C)	1.0
Viscosity [mPas] at 23 °C, Brookfield spindle/rpm 4/5	1700
Minimal curing time [s] DELO Standard 23, UVA intensity: 60 mW/cm ² , DELOLUXcontrol	12
Compression shear strength glass/glass [MPa] DELO Standard 5 LED intensity: 400nm, 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	16
Compression shear strength glass/Al [MPa] DELO Standard 5 LED intensity 400nm: 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	12
Compression shear strength glass/PA [MPa] DELO Standard 5 LED intensity 400nm: 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	11
Compression shear strength glass/LCP [MPa] DELO Standard 5 LED intensity 400nm: 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	10
Compression shear strength PC/PC [MPa] DELO Standard 5 LED intensity 400nm: 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	2
Compression shear strength glass/PBT [MPa] DELO Standard 5 LED intensity 400nm: 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	5
Compression shear strength PMMA/PMMA [MPa] DELO Standard 5 LED intensity 400nm: 150 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s	9

Performance under temperature and media influence



initial b* value DELO Standard 25	1,8
Tensile strength [MPa] DIN EN ISO 527	15
Elongation at tear [%] DIN EN ISO 527	180
Young's modulus [MPa] DIN EN ISO 527	400

Shore hardness D according to DIN EN ISO 868	60
Glass transition temperature [°C] DMTA	70
Volume shrinkage [%] DELO Standard 13	5,5
Water absorption [%] according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	0,1
Water permeation [g/(m ² ·d)] according to ASTM E96 at +60 °C and 90 % relative humidity layer thickness: 1 mm	14
Storage life at room temperature (0 °C to +25 °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. It is the customer's responsibility to test the suitability of the product for the intended purpose 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. The data and information provided are therefore no guarantee for specific product properties or the suitability of the product for the intended 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 DELOs' General Terms of Business. Verbal side agreements are not permitted. This document is subject to change.

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