

# DELO DUALBOND® LT2268

#### modified epoxy resin | 1C | light-fixable / heat-curing

free of solvents, free of antimony | low-temperature-curing from + 60 °C, heat curing mandatory, light-fixable, low-temperature-curing, flow-resistant, filled, fast fixation, light-blocking, thixotropic

# **Special features of product**

- compliant with RoHS Directive 2015/863/EU
- halogen-free according to IEC 61249-2-21
- tested for biocompatibility and meets the requirements according to DIN EN ISO 10993-5: test for cytotoxicity

# **Function**

electronic adhesive

### Typical area of use

• -40 - 150 °C

## **Curing**

Suitable lamp types	LED 365 nn	LED 365 nm, LED 400 nm	
Typical light fixation time			
intensity 1000 mW/cm² LED 365 nm	1	S	
Typical curing time			
at +80 °C in air convection oven	60	min	
Processing			
Processing  Typical adhesive application	needle disp	ensing	
	needle disp	ensing	
Typical adhesive application	needle disp	ensing h	
Typical adhesive application  Conditioning time (typical)  when stored in cold conditions	needle disp		
Typical adhesive application  Conditioning time (typical)  when stored in cold conditions in containers up to 50 ml	needle disp		



		container

at -25 °C to -15 °C	6	month(s)
Technical properties		
Color in cured condition in 1 mm layer thickness	black	
Transparency in cured condition in 1 mm layer thickness	opaque	
Filler particle type	polymer	
Parameters		
Density by the criteria of DIN 66137-2   liquid	1.16	g/cm³
Viscosity by the criteria of DIN 53019   liquid   Rheometer   Shear rate: 10 1/s   Gap: 500 μm	60000	mPa·s
Thixotropy index by the criteria of DIN 53019   liquid   Rheometer   Gap: 500 µm	8.1	
Compression shear strength  DELO Standard 5   AI   AI   Pretreatment: Laser   80 °C   60 min	22	MPa
Compression shear strength  DELO Standard 5   FR4   FR4   Pretreatment: Annealing   80 °C   60 min	23	MPa
Compression shear strength  DELO Standard 5   LCP MR25   LCP MR25   80 °C   60 min	7	MPa
Compression shear strength  DELO Standard 5   <b>Ni</b>   <b>Ni</b>   80 °C   60 min	18	MPa
Compression shear strength  DELO Standard 5   PA11T   PA11T   Pretreatment: Annealing   80 °C   60 min	14	MPa
Compression shear strength  DELO Standard 5   PA6   PA6   Pretreatment: Annealing   80 °C   60 min	11	MPa
Compression shear strength  DELO Standard 5   PC   PC   80 °C   60 min	15	MPa
Tensile strength by the criteria of DIN EN ISO 527   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	14	MPa



Elongation at tear by the criteria of DIN EN ISO 527   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	110	%
Young's modulus DMTA   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	500	MPa
Shore hardness D by the criteria of DIN EN ISO 868   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	46	
Glass transition temperature DMTA   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	32	°C
Coefficient of linear expansion  DELO Standard 26   TMA   Evaluation T: -40 °C - 0 °C   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	92	ppm/K
Coefficient of linear expansion  DELO Standard 26   TMA   Evaluation T: 50 °C - 130 °C   365 nm   1000 mW/cm²   1 s   Plus   80 °C   60 min	218	ppm/K
Water absorption by the criteria of DIN EN ISO 62   Layer thickness: 4 mm   365 nm   1000 mW/cm²   1 s   Plus   80 °C 60 min   Type of storage: Media   Medium: Distilled water   Duration: 24 h	0.2 C/	wt. %
Transmission at wavelength: 450 nm   <b>Glass</b>   <b>Glass</b>   Layer thickness: 300 µm   365 nm   1000 mW/cm²   1 s   Pla   80 °C   60 min	0.5 us	%
Converting table		
$^{\circ}F = (^{\circ}C \times 1.8) + 32$ 1 MPa = 145.04 psi 1 inch = 25.4 mm 1 GPa = 145.04 ksi 1 mil = 25.4 $\mu$ m 1 cP = 1 mPa·s		

#### **General curing and processing information**

1 oz = 28.3495 g

1cP = 1mPa·s 1 N = 0.225 lb

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. The heating time of the components must be added to the actual curing time. It depends on component size and type of heat input. The specified curing temperature must be reached directly at the adhesive. 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. Depending on the adhesive quantity used, exothermic reaction heat is generated which can lead to overheating. In this case, a lower curing temperature is to be selected. All curing or light fixation parameters depend on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer. Optional prefixation is performed with light. Heat curing is mandatory. 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.

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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.

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 quarantee. 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 DUALBOND LT2268 | as of 06.10.2023 08:42 | Page 4 of 4

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