

# DELO DUALBOND® GE4926 (C-Sample)

## modified acrylate | 1C | UV- / VIS- / humidity-curing

free of solvents | dual-curing, very good media resistance, very good temperature resistance, tension-equalizing, unfilled

# **Special features of product**

# compliant with RoHS Directive 2015/863/EU

#### **Function**

electronic encapsulant

## Typical area of use

-40 - 160 °C

# **Curing**

Curing		
Suitable lamp types	LED 36	5 nm, LED 400 nm
Typical irradiation time		
intensity 200 mW/cm² LED 400 nm layer thickness 100 μm	5	S
intensity 1000 mW/cm² LED 400 nm layer thickness 100 μm	2	S
intensity 200 mW/cm² LED 400 nm layer thickness 1.0 mm	15	S
intensity 1000 mW/cm² LED 400 nm layer thickness 1.0 mm	7	S
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Processing		

Typical adhesive application	needle dispensing	
Conditioning time (typical)		
when stored in cold conditions in containers up to 50 ml	1.5	h
when stored in cold conditions in containers up to 600 ml	5	h
Processing time		
at rt approx. +23 °C	28	d



Storage life in unopened original container
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up to <= 600 ml at 0 °C to +10 °C	6	month(s)
Technical properties		
Transparency	transparent	
Color in cured condition in 1 mm layer thickness	colorless	
Fluorescence	blue fluoresc	ent
Parameters		
Density by the criteria of DIN 66137-2   liquid	1.06	g/cm³
Viscosity by the criteria of DIN 53019   liquid   Rheometer   Shear rate: 10 1/s   Gap: 200 μm	10000	mPa·s
Viscosity by the criteria of DIN 53019   liquid   Rheometer   Shear rate: 1000 1/s   Gap: 400 μm   Measuring temperature: 60 °C	1200	mPa·s
Compression shear strength DELO Standard 5   <b>Glass</b>   <b>AI</b>   400 nm   200 mW/cm²   30 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h	4	MPa
Compression shear strength  DELO Standard 5   Glass   PA66   400 nm   200 mW/cm²   30 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h	3	MPa
Compression shear strength  DELO Standard 5   Glass   PBT   400 nm   200 mW/cm²   30 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   72 h	3	MPa
Compression shear strength DELO Standard 5   <b>PC</b>   <b>PC</b>   400 nm   200 mW/cm²   30 s   Plus   at approx. +23 °C   Rel. air humidity 50 %   72 h	3	MPa
Tensile strength by the criteria of DIN EN ISO 527   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	5	MPa
Elongation at tear by the criteria of DIN EN ISO 527   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	200	%



Young's modulus DMTA   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	<10	MPa
Shore hardness A by the criteria of DIN EN ISO 868   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	34	
Glass transition temperature DMTA   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	-30	°C
Coefficient of linear expansion  DELO Standard 26   TMA   Evaluation T: -20 °C - 150 °C   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	270	ppm/K
Shrinkage DELO Standard 13   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 % 168 h	3.5 /	vol. %
Water absorption by the criteria of DIN EN ISO 62   Layer thickness: 4 mm   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h   Type of storage: Media   Medium: Distilled water   Duration: 24 h	1.1	wt. %
Dielectric strength by the criteria of DIN EN 60243-1   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	22	kV/mm
Comparative Tracking Index by the criteria of DIN EN 60112   400 nm   200 mW/cm²   60 s   Plus   at approx. +23 °C   Rel. air humidity: 50 %   168 h	600	

#### **Converting table**

°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 µm	1 cP	= 1 mPa·s
1 oz	= 28.3495 g	1 N	= 0.225 lb
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## 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. 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.

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

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**DELO** Industrial Adhesives Headquarters



CURING

