

DELO DUALBOND® GE4906

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

free of solvents | dual-curing, fast light fixation possible

Special features of product

- compliant with RoHS Directive 2015/863/EU
- compliant with limits of VOC content in adhesive acc. to GB33372-2020
- tested for biocompatibility and meets the requirements according to DIN EN ISO 10993-5: test for cytotoxicity

Function

- encapsulant / potting compound

Typical area of use

- -40 - 150 °C
- pin sealing

Curing

Suitable lamp types LED 365 nm, LED 400 nm

Typical irradiation time

*intensity 200 mW/cm²
LED 400 nm
layer thickness 100 µm* 7 s

*intensity 1000 mW/cm²
LED 400 nm
layer thickness 100 µm* 4 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 1,000 ml* 4 h

Processing time

*in standard climate +23 °C / 50 % r. h.
in containers up to 600 ml* 30 d

Storage life in unopened original container

up to <= 600 ml 6 month(s)
at 0 °C to +10 °C

Technical properties

Color in uncured condition	yellowish
Transparency	transparent
Color in cured condition in 0.1 mm layer thickness	yellowish
Transparency in cured condition in 0.1 mm layer thickness	transparent
Color in cured condition in 1 mm layer thickness	yellowish
Fluorescence	blue fluorescent
Filler information	unfilled

Parameters

Density <i>DELO Standard 13 liquid</i>	1.01	g/cm ³
Viscosity <i>by the criteria of DIN 53019 liquid Rheometer Shear rate: 1 1/s Gap: 500 µm</i>	2100	mPa·s
Viscosity <i>by the criteria of DIN 53019 liquid Rheometer Shear rate: 2 1/s Gap: 500 µm</i>	2000	mPa·s
Viscosity <i>by the criteria of DIN 53019 liquid Rheometer Shear rate: 10 1/s Gap: 500 µm</i>	2100	mPa·s
Thixotropy index <i>by the criteria of DIN 53019 liquid Rheometer Gap: 500 µm</i>	1.0	
Maximum curable layer thickness <i>DELO Standard 20 400 nm 200 mW/cm² 60 s</i>	4	mm
Compression shear strength <i>DELO Standard 5 Glass Al 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i>	1	MPa
Compression shear strength <i>DELO Standard 5 Glass Stainless steel 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i>	2	MPa

<p>Compression shear strength <i>DELO Standard 5 Glass PA6 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	2	MPa
<p>Compression shear strength <i>DELO Standard 5 Glass PBT 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	1	MPa
<p>Compression shear strength <i>DELO Standard 5 Glass PPA 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	2	MPa
<p>Compression shear strength <i>DELO Standard 5 PC PC 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	6	MPa
<p>Tensile strength <i>by the criteria of DIN EN ISO 527 400 nm 200 mW/cm² 90 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	4	MPa
<p>Elongation at tear <i>by the criteria of DIN EN ISO 527 400 nm 200 mW/cm² 90 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	540	%
<p>Young's modulus <i>DMTA 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	< 10	MPa
<p>Shore hardness A <i>by the criteria of DIN EN ISO 868 400 nm 200 mW/cm² 90 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	24	
<p>Glass transition temperature <i>DMTA 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	10	°C
<p>Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: -40 °C - 150 °C 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	240	ppm/K
<p>Shrinkage <i>DELO Standard 13 400 nm 200 mW/cm² 90 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	5.6	vol. %
<p>Water absorption <i>by the criteria of DIN EN ISO 62 Layer thickness: 4 mm 400 nm 200 mW/cm² 90 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h Type of storage: Media Medium: Distilled water Storage temperature: at approx. +23 °C</i></p>	1.1	wt. %
<p>Comparative Tracking Index <i>by the criteria of DIN EN 60112 400 nm 200 mW/cm² 60 s Plus at approx. +23 °C Rel. air humidity: 50 % 72 h</i></p>	600	

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. 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.

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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

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