

DELO DUALBOND® GE731

modified epoxy resin | 1C | UV- / VIS- / heat-curing

free of solvents | thixotropic

Special features of product

- compliant with RoHS Directive 2015/863/EU
- passes ANSI/UL 94 HB Flame Test
- 400 nm only in combination with heat curing

Typical area of use

- -40 - 180 °C

Curing

Suitable lamp types LED 365 nm, LED 400 nm

Typical light fixation time

*intensity 150 mW/cm²
LED 365 nm* 30 s

Typical curing time

*at +130 °C
in air convection oven* 10 min

*at +150 °C
in air convection oven* 5 min

Processing

Typical adhesive application needle dispensing

Conditioning time (typical)

when stored in cold conditions 6 h

Processing time

at rt approx. +23 °C 21 d

Storage life in unopened original container

at 0 °C to +10 °C 6 month(s)

Technical properties

Transparency	translucent
Color in cured condition in 1 mm layer thickness	yellowish
Transparency in cured condition in 1 mm layer thickness	transparent

Parameters

Density <i>DELO Standard 13</i>	1.09	g/cm ³
Viscosity <i>Rheometer Shear rate: 2 1/s</i>	10000	mPa·s
Maximum curable layer thickness <i>DELO Standard 20 White substrate 365 nm 150 mW/cm² 30 s Plus at approx. +23 °C 24 h</i>	≥4	mm
Compression shear strength <i>DELO Standard 5 Glass Glass 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	4	MPa
Elongation at tear <i>Based on DIN EN ISO 527 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	98	%
Young's modulus <i>DMTA 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	<10	MPa
Shore hardness A <i>Based on DIN EN ISO 868 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	43	
Glass transition temperature <i>DMTA 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	-33	°C
Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: -20 °C - 150 °C 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	274	ppm/K
Shrinkage <i>DELO Standard 13 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min</i>	2	vol. %
Water absorption <i>Based on DIN EN ISO 62 365 nm 150 mW/cm² 30 s Plus 130 °C 10 min Type of storage: Media Medium: Distilled water Storage temperature: at approx. +23 °C Duration: 24 h</i>	0.4	wt. %

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.

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.

Parameters can vary for pure light curing, pure heat curing and a combination of light and heat curing.

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.

Curing until final strength proceeds within 24 hours at room temperature.

Light and heat curing mechanisms can be used independently.

High temperatures during or after curing can lead to post-crosslinking of the adhesive which influences the physical properties of the bond.

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

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CONTACT