

DELO[®] KATIOBOND[®] GE680

modified epoxy resin | 1C | UV-curing

free of solvents | filled, thixotropic | low CTE

Special features of product

- compliant with RoHS Directive 2015/863/EU
- tested for biocompatibility and meets the requirements according to USP 30, NF 25, Class VI
- compliant with limits of VOC content in adhesive acc. to GB33372-2020

Function

- encapsulant / potting compound

Typical area of use

- -40 - 150 °C
- encapsulation of chip modules

Curing

Suitable lamp types LED 365 nm, UVA

Typical irradiation time

*intensity 200 mW/cm²
LED 365 nm* 5 s

Processing

Typical adhesive application needle dispensing

Conditioning time (typical)

in containers up to 50 ml 1 h

in containers up to 1,000 ml 6 h

Processing time

*at rt approx. +23 °C
in containers up to 50 ml* 7 d

*at rt approx. +23 °C
in containers up to 900 ml* 3 d

Storage life in unopened original container

at 0 °C to +10 °C 6 month(s)

Technical properties

Color in cured condition in 0.1 mm layer thickness	whitish
Transparency in cured condition in 1 mm layer thickness	translucent
Filler particle type	minerals
Filler particle size	d99 = 90 µm
Filler content	78 wt. %

Parameters

Density <i>liquid</i>	1.8	g/cm ³
Viscosity <i>liquid Rheometer Shear rate: 10 1/s Gap: 500 µm</i>	70000	mPa·s
Thixotropy index <i>liquid Rheometer Gap: 500 µm</i>	2	
Minimum irradiation time <i>DELO Standard 37 DSC 365 nm 200 mW/cm² Measuring temperature: 30 °C</i>	5	s
Maximum curable layer thickness <i>DELO Standard 20 White substrate 365 nm 200 mW/cm² 5 s Plus at approx. +23 °C 24 h</i>	3.2	mm
Maximum curable layer thickness <i>DELO Standard 20 White substrate 365 nm 200 mW/cm² 30 s Plus at approx. +23 °C 24 h</i>	≥4	mm
Compression shear strength <i>DELO Standard 5 Glass AI 365 nm 200 mW/cm² 5 s Plus at approx. +23 °C 24 h</i>	20	MPa
Compression shear strength <i>DELO Standard 5 Glass FR4 365 nm 200 mW/cm² 5 s Plus at approx. +23 °C 24 h</i>	16	MPa
Compression shear strength <i>DELO Standard 5 Glass Glass 365 nm 200 mW/cm² 5 s Plus at approx. +23 °C 24 h</i>	20	MPa
Compression shear strength <i>DELO Standard 5 Glass LCP GF30 365 nm 200 mW/cm² 5 s Plus at approx. +23 °C 24 h</i>	7	MPa

Compression shear strength 11 MPa
DELO Standard 5 | Glass | PBT | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Tensile strength 37 MPa
by the criteria of DIN EN ISO 527 | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Elongation at tear 0.7 %
by the criteria of DIN EN ISO 527 | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Young's modulus 16800 MPa
DMTA | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Shore hardness D >90
by the criteria of DIN EN ISO 868 | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Glass transition temperature 160 °C
DMTA | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Coefficient of linear expansion 33 ppm/K
DELO Standard 26 | TMA | Evaluation T: 30 °C - 150 °C | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Shrinkage 1.7 vol. %
DELO Standard 13 | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h

Water absorption 0.06 wt. %
by the criteria of DIN EN ISO 62 | Layer thickness: 4 mm | 365 nm | 200 mW/cm² | 5 s | Plus | at approx. +23 °C | 24 h | Type of storage: Media | Medium: Distilled water | Duration: 24 h

Relative permittivity 3.5
by the criteria of RF-IV | 1 MHz

Relative permittivity 3.2
by the criteria of RF-IV | 1 GHz

Relative permittivity 3.5
by the criteria of RF-IV | 10 MHz

Relative permittivity 3.5
by the criteria of RF-IV | 100 MHz

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

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ADHESIVES

DISPENSING

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