DELO® KATIOBOND® 45952

modified epoxy resin | 1C | preactivated

free of solvents | preactivated, electrically insulating, tension-equalizing, unfilled, thixotropic

Special features of product

- halogen-free according to IEC 61249-2-21
- compliant with RoHS Directive 2015/863/EU
- passes ANSI/UL 94 HB Flame Test

Function

- sealant

Typical area of use

- -40 - 150 °C
- pin sealing

Curing

Suitable lamp types	LED 365 nm, LED 400 nm, LED 460 nm, UVA	
Typical preactivation time *intensity 200 mW/cm²* *LED 460 nm*	8	s
Typical open time *intensity 200 mW/cm²* *LED 460 nm*	15 - 18	s
Typical irradiation time *intensity 200 mW/cm²* *LED 400 nm*	30 - 60	s
Typical curing time *at rt approx. + 23 °C* *preactivated*	24	h

Processing

Typical adhesive application	needle dispensing, jetting

Processing time		
at rt approx. +23 °C	14	d
Storage life in unopened original container		
at 0 °C to +25 °C	6	month(s)

Technical properties

Color in cured condition in 0.1 mm layer thickness	yellow	
Transparency in cured condition in 0.1 mm layer thickness	transparent	
Fluorescence	fluorescent	

Parameters

Density *by the criteria of DIN EN ISO 2811-3 | liquid*	1.15	g/cm³
Viscosity *liquid | Rheometer | Shear rate: 10 1/s*	6300	mPa·s
Thixotropy index *liquid | Rheometer*	2.8	
Maximum layer thickness that can be preactivated *DELO Standard 21 | **White substrate** | Preactivation | 460 nm | 200 mW/cm² | 8 s | Plus | at approx. +23 °C | 24 h*	≥4	mm
Compression shear strength *DELO Standard 5 | **Al** | **Al** | Pretreatment: Laser | Preactivation | 460 nm | 200 mW/cm² | 8 s | Plus | at approx. +23 °C | 24 h*	27	MPa
Compression shear strength *DELO Standard 5 | **Glass** | **Al** | 400 nm | 200 mW/cm² | 60 s | Plus | at approx. +23 °C | 24 h*	>20	MPa
Compression shear strength *DELO Standard 5 | **Glass** | **FR4** | 400 nm | 200 mW/cm² | 60 s | Plus | at approx. +23 °C | 24 h*	>20	MPa
Compression shear strength *DELO Standard 5 | **Glass** | **Glass** | 400 nm | 200 mW/cm² | 60 s | Plus | at approx. +23 °C | 24 h*	>20	MPa
Compression shear strength *DELO Standard 5 | **Glass** | **LCP GF30** | 400 nm | 200 mW/cm² | 60 s | Plus | at approx. +23 °C | 24 h*	6	MPa

Compression shear strength *DELO Standard 5	**Glass**	**PBT**	*400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	7	MPa
Compression shear strength *DELO Standard 5	**PC**	**Al**	*400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	10	MPa
Compression shear strength *DELO Standard 5	**PC**	**PC**	*400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	15	MPa
Compression shear strength *DELO Standard 5	**PMMA**	**PMMA**	*Preactivation	460 nm	200 mW/cm²	9 s	Plus	at approx. +23 °C	24 h*	9	MPa
Tensile strength *by the criteria of DIN EN ISO 527	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	30	MPa
Elongation at tear *by the criteria of DIN EN ISO 527	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	85	%
Young's modulus *DMTA	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h	Type of storage: Temp.	Storage temperature: 205 °C	Duration: 30 min*	1100	MPa
Shore hardness D *by the criteria of DIN EN ISO 868	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	67	
Glass transition temperature *DMTA	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h	Type of storage: Temp.	Storage temperature: 205 °C	Duration: 30 min*	39	°C
Coefficient of linear expansion *DELO Standard 26	TMA	Evaluation T: 30 °C - 145 °C	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	200	ppm/K
Shrinkage *DELO Standard 13	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	3.7	vol. %
Water absorption *by the criteria of DIN EN ISO 62	Layer thickness: 2 mm	400 nm	200 mW/cm²	60 s	Plus	at approx. +23 °C	24 h	Type of storage: Media	Medium: Distilled water	Duration: 24 h*	2.1	wt. %
Decomposition temperature *DELO Standard 36*	220	°C
Comparative Tracking Index M *by the criteria of DIN EN 60112	60 mW/cm²	60 s	Plus	at approx. +23 °C	24 h*	> 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.A short irradiation time (preactivation time) results in an open time within which opaque components can be joined.The cationic curing mechanism enables the adhesive to cure on opaque components after joining by sufficient preactivation. 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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