

DELO DUALBOND[®] IC4753

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

free of solvents | dual-curing, low-temperature-curing, isotropic electrically conductive, light-fixable, silver-filled, thixotropic

Special features of product

- compliant with RoHS Directive 2015/863/EU
- halogen-free according to IEC 61249-2-21

Function

- electronic adhesive

Typical area of use

- -40 - 120 °C

Curing

Suitable lamp types LED 365 nm, LED 400 nm

Typical light fixation time

*intensity 200 mW/cm²
LED 400 nm* 10 s

Typical curing time

*at +80 °C
in air convection oven* 20 min

*at +100 °C
in air convection oven* 10 min

Processing

Conditioning time (typical)

*when stored in cold conditions
in containers up to 10 ml* 0.5 h

Processing time

in standard climate +23 °C / 50 % r. h. 24 h

Storage life in unopened original container

at -40 °C 6 month(s)

Technical properties

Color in cured condition in 1 mm layer thickness	silver-gray
Transparency in cured condition in 1 mm layer thickness	opaque
Filler particle type	silver

Parameters

Density <i>DELO Standard 13 liquid</i>	3.17	g/cm ³
Viscosity <i>liquid Rheometer Shear rate: 10 1/s Gap: 500 µm</i>	25000	mPa·s
Compression shear strength <i>DELO Standard 5 AI AI 100 °C 15 min</i>	13	MPa
Compression shear strength <i>DELO Standard 5 FR4 FR4 100 °C 15 min</i>	14	MPa
Compression shear strength <i>DELO Standard 5 Ni Ni 100 °C 15 min</i>	11	MPa
Die shear strength <i>DELO Standard 30 Si Chip 1 mm x 1 mm Au Platine 25 mm x 15 mm 100 °C 15 min</i>	18	N
Die shear strength <i>DELO Standard 30 Si Chip 1 mm x 1 mm Ni Platine 25 mm x 15 mm 100 °C 15 min</i>	16	N
Tensile strength <i>by the criteria of DIN EN ISO 527 100 °C 15 min</i>	9	MPa
Elongation at tear <i>by the criteria of DIN EN ISO 527 100 °C 15 min</i>	70	%
Young's modulus <i>DMTA 100 °C 15 min</i>	1100	MPa
Shore hardness A <i>by the criteria of DIN EN ISO 868 100 °C 15 min</i>	81	
Glass transition temperature <i>DMTA 100 °C 15 min</i>	48	°C
Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: -40 °C - 0 °C 100 °C 15 min</i>	62	ppm/K

Coefficient of linear expansion <i>DELO Standard 26 TMA Evaluation T: 60 °C - 100 °C 100 °C 15 min</i>	167	ppm/K
Shrinkage <i>100 °C 15 min</i>	5	vol. %
Water absorption <i>by the criteria of DIN EN ISO 62 100 °C 15 min Type of storage: Media Medium: Distilled water Duration: 24 h</i>	0.1	wt. %
Specific thermal conductivity <i>by the criteria of ASTM D 5470 100 °C 15 min</i>	0.9	W/(m·K)
Electrical resistivity <i>DELO Standard 29 100 °C 15 min</i>	0.1	mOhm·cm

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. 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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