DELO DUALBOND® AD340

modified polycarbamin acid derivate | 1C | light-fixable / heat-curing

free of solvents | heat curing mandatory, light-fixable, low-temperature-curing, unfilled

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 - 130 °C
- fast component fixation

Curing

Suitable lamp types	LED 365 nm, LED 400 nm	
Typical light fixation time		
intensity 55 - 60 mW/cm² *UVA*	1 - 5	s
Typical curing time		
at +80 °C *in air convection oven*	30	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
when stored in cold conditions *in containers up to 50 ml*	1	h
when stored in cold conditions *in containers up to 170 ml*	2	h
Processing time		
in standard climate +23 °C / 50 % r. h.	72	h

Storage life in unopened original container		
at -18 °C	6	month(s)

Technical properties

Color in cured condition in 1 mm layer thickness	beige	
Transparency in cured condition in 1 mm layer thickness	opaque	

Parameters

Density *DELO Standard 13 | liquid*	1.17	g/cm³
Viscosity *liquid | Rheometer | Shear rate: 10 1/s | Gap: 200 µm*	15600	mPa·s
Compression shear strength *DELO Standard 5 | **Al** | **Al** | 100 °C | 45 min*	15	MPa
Compression shear strength *DELO Standard 5 | **FR4** | **FR4** | 100 °C | 45 min*	32	MPa
Compression shear strength *DELO Standard 5 | **Glass** | **Glass** | 100 °C | 45 min*	23	MPa
Compression shear strength *DELO Standard 5 | **LCP GF30** | **LCP GF30** | 100 °C | 45 min*	8	MPa
Compression shear strength *DELO Standard 5 | **PBT** | **PBT** | 100 °C | 45 min*	13	MPa
Tensile strength *by the criteria of DIN EN ISO 527 | 100 °C | 45 min*	11	MPa
Elongation at tear *by the criteria of DIN EN ISO 527 | 100 °C | 45 min*	4.0	%
Young's modulus *by the criteria of DIN EN ISO 527 | 100 °C | 45 min*	400	MPa
Shore hardness D *by the criteria of DIN EN ISO 868 | 100 °C | 45 min*	52	
Glass transition temperature *DELO Standard 26 | TMA | 60 mW/cm² | 10 s | Plus | 120 °C | 20 min*	75	°C

Coefficient of linear expansion *DELO Standard 26 | TMA | Evaluation T: 30 °C - 70 °C | 60 mW/cm² | 10 s | Plus | 120 °C | 20 min*	115	ppm/K
Coefficient of linear expansion *DELO Standard 26 | TMA | Evaluation T: 80 °C - 160 °C | 60 mW/cm² | 10 s | Plus | 120 °C | 20 min*	182	ppm/K
Shrinkage *DELO Standard 13 | 100 °C | 45 min*	3.1	vol. %
Water absorption *by the criteria of DIN EN ISO 62 | Layer thickness: 2 mm | 100 °C | 45 min | Type of storage: Media | Medium: Distilled water | Storage temperature: at approx. +23 °C*	0.5	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.Only a small part of the bonding should be light-fixed as the maximum build-up of adhesion is achieved by pure heat curing.The period of time between prefixation and heat curing should not exceed 1 h at room temperature (approx. +23 °C / 50 % r.h.).The adhesive shows postcuring behavior. After heat curing at low temperatures and a short curing time, a certain level of strength is already achieved. The adhesive postcures at room temperature and achieves a level of strength corresponding to the curing temperature after approx. 24 hours.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.Optional prefixation is performed with light. Heat curing is mandatory.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

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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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