DELO
INDUSTRIAL ADHESIVES

DELO®-DUALBOND

Light- and heat-curing epoxy resin adhesives

Instructions for use & General information on the product group

Application areas

DELO®-DUALBOND products are predominantly used in electronics, micro-electronics, electrical engineering and precision engineering for bonding, coating, fixing and sealing.

The adhesives are cured by light, using a light source with the wavelength range specified in the technical data sheet. DELOLUX® irradiation equipment is suitable.

Furthermore, curing can also be effected by heat or a combination of both curing mechanisms.

Preparation of the components to be bonded

The contact surfaces must be free of humidity, grease and other contaminations in order to achieve optimal bond strength. When using watery cleaners with alkaline properties, these must be removed from the surface to be bonded after cleaning by suitable rinsing cycles.

After cleaning, adhesion to the component can be further improved by means of surface pretreatment. You can draw additional details from the written information on surface pretreatment.

The suitability and strength of the adhesive are to be verified on original components under application-specific conditions.

Preparation of the adhesive

The adhesives should be conditioned to room temperature before bonding without adding temperature. Condensation water on adhesive and substrate should be prevented or evaporated before application.

Processing

The products are supplied ready for use. They can be processed by means of DELO® dispensing units DELOMAT®.

Preparation/pretreatment → Application → Joining → Curing
Production flow for bonding components:
1. Preparation/pretreatment of the components
2. Application of the adhesive to one component
3. Joining
4. Curing by irradiation with UV and visible light (e. g. in case of a translucent component, the complete adhesive area must be irradiated) or/and heat addition

Preparation/pretreatment → Application → Joining → Irradiation → Curing
Production flow for bonding components with precuring:
1. Preparation/pretreatment of the components
2. Application of the adhesive to one component
3. Joining
4. Irradiation with UV and visible light for precuring (fixing of the component)
5. Curing by heat addition

Preparation/pretreatment→ Application → Curing
Production flow for coatings:
1. Preparation/pretreatment of the components to be casted
2. Application of the adhesive
3. Curing with UV and visible light or/and heat addition

Curing

The adhesive can be cured by heat addition as well as by light. Complete curing by light can only proceed if the total adhesive is reached by light of the suitable wavelength.

That means that
- the adhesive must be open (casting, coating)
- or at least one of two components to be bonded is made of a translucent material

Adhesive which is not reached by light can be completely cured by subsequent heat addition.

The irradiation times as well as curing temperatures and times are product-specific and can be drawn from the respective technical data sheet.

In case of heat curing, the heating time of the components must be added to the curing time. The heating time should not exceed approx. 15 minutes. Heating can proceed in air convection ovens, with IR transmitters or other suitable heat sources. It is important that the curing temperature is reached at the adhesive. In case of curing temperatures below the temperature ranges specified in the technical data sheet, curing is decelerated or the product cures incompletely or not at all. The adhesive must not be heated beyond the resistance temperature.

When selecting a lamp, attention must be paid to the emission spectrum. DELO® offers a lamp range tailored to the adhesives. The curing time depends on product and lamp (see technical data sheets). The curing speed of the respective products can be varied through the parameters lamp type, lamp intensity, lamp distance and irradiation time.

Adhesive containers and dispensing tips must be protected or shielded against UV and visible light. During filling, no scattered radiation may reach the inside of the container.

You can draw the detailed, product-specific information on the processing of each product from the respective technical data sheet.

Instructions and advice for occupational health and safety

see material safety data sheet

Skin and eyes must be protected against UV radiation or glare of the lamp. A respective shielding of the lamp by means of yellow-colored plastic or grey glass and colored protective glasses (e. g. green or brown) is recommended for eye protection.

Storage

After delivery in unopened, opaque container.

Cool storage is recommendable.

Storage life: see technical data sheet

The container should not be exposed to direct solar radiation as it can heat up strongly due to its color.

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 user's responsibility to test the suitability of the product for the intended purpose by considering all specific requirements. Type and 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.

If you have any further questions

Please contact us.

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