

DELO-KATIOBOND® KB694

UV-curing encapsulant for Smart-Card technology, dam for Dam&Fill

Base

- modified epoxy resin
- one-component, solvent-free, UV-curing, thixotropic

Use

- encapsulation of chip modules in the Dam&Fill method as Dam compound. We recommend DELO-KATIOBOND 4668 as Fill compound forming a homogeneous unit with DELO-KATIOBOND KB694
- especially suitable for smart card technology, e. g., phone or health insurance cards
- the system enables extremely short cycle times and, therefore, an increase in productivity and a decrease in production costs
- very hard encapsulation for optimal protection during module implanting
- for many years this system has proven to be highly reliable
- low corrosion potential due to high ion purity
- compliant with RoHS directive 2002/95/EC

Processing

- the adhesive is supplied ready for use; in case of cool storage, it must be ensured that the container is conditioned to room temperature before use
- the containers are conditioned at room temperature (max. 25 °C); the conditioning time is approx. 5 h for containers up to 610 ml and 7 h for containers up to 950 ml; additional heat addition is not allowed
- store in a cool place (0 °C to +10 °C)
- do not tumble the DAM material
- a variation of the flow properties is possible by a dispensing valve heating
- for further information please refer to our brochure "Smart Card"

Curing

- curing with UVA light in a recommended wavelength range of 320 - 400 nm
- high initial strength after irradiation; therefore, complete protective function
- after irradiation curing until final strength within 24 h at room temperature
- increased temperatures accelerate the reaction, lower temperature decelerate it
- increased intensities shorten the required irradiation time, lower intensities prolong it

Curing parameters

- dependent on the layer thickness of the DAM material, lamp type and irradiation intensity

Technical data

Color

cured in a layer thickness of approx. 0.1 mm

light gray transparent

DELO Industrial Adhesives
DELO-Allee 1
86949 Windach · Germany
Phone +49 8193 9900-0
Fax +49 8193 9900-144
info@DELO.de · www.DELO.de

Color cured in a layer thickness of approx. 0.5 mm	light gray
Filler content [weight %]	40
Filler particle size [µm]	≤32
Density [g/cm³] DELO Standard 13 at room temperature (approx. 23 °C)	1.4
Viscosity [mPas] at 23 °C, Brookfield rpm 7/5	180000
Recommended irradiation time [s] DELOLUX 03 S, UVA intensity: 55 - 60 mW/cm ² DELOLUXcontrol	60
Curing time until final strength [h] at room temperature (approx. 23 °C) after irradiation	24
Compression shear strength glass/glass [MPa] DELO Standard 5 UVA intensity: 55 - 60 mW/cm ² , DELOLUXcontrol, irradiation time: 60 s curing time: 24 h at room temperature (approx. 23 °C)	24
Tensile strength [MPa] DIN EN ISO 527	50
Elongation at tear [%] DIN EN ISO 527	2
Young's modulus [MPa] DIN EN ISO 527	3700
Shore hardness D according to DIN EN ISO 868	86
Glass transition temperature [°C] rheometer	130
Glass transition temperature [°C] TMA	82
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +25 to 60 °C	81
Coefficient of linear expansion [ppm/K] TMA, in a temperature range of +100 to 150 °C	146
Water absorption [weight %] according to DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	0.29
Ion content Na+ [ppm] extraction	<10
Ion content K+ [ppm] extraction	<10
Ion content Cl- [ppm] extraction	<10
Ion content F- [ppm] extraction	<100
Storage life at 0 °C to +10 °C in unopened original container	6 months

Instructions and advice

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.

Many product properties are subject to temperature and may change permanently, especially at high temperatures.

It is the user's responsibility to test the suitability of the product for the intended purpose and temperature range of use 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.

Instructions for use

The instructions for use of DELO-KATIOBOND are available on: www.DELO.de. We will be pleased to send them to you on demand.

Occupational health and safety

see material safety data sheet

Specification

see quality assurance test report