

DELO-DUALBOND® OC4911

UV/light and humidity-curing acrylate adhesive, low viscosity

Base

- modified acrylate
- one-component, solvent-free

Use

- optically clear adhesive for full area glass to glass bonding, e.g. display or touch panel bonding, especially for industrial applications
- highly flexible, tension-equalizing
- compliant with RoHS directive 2015/863/EU
- halogen-free according to IEC 61249-2-21

Processing

- supplied ready for use; in case of cold storage, it must be ensured that the container is conditioned to room temperature before use
- the containers are conditioned at room temperature (+18 °C to +25 °C); the conditioning time is approx. 0.5 h for containers up to 50 ml and approx. 4 h for containers up to 1,000 ml; additional heat addition is not allowed
- the adhesive can be applied by dispensing
- the surfaces to be bonded must be dry as well as free of dust, grease and other contaminations
- dispensing valves and product-bearing elements must be carefully cleaned before use, residues of other products must be completely removed; DELOTHEN EP is recommended to remove DELO-DUALBOND residues
- for further information please refer to our instructions for use DELO-DUALBOND, the brochure "Light Curing" and the brochure "Optically clear Adhesives"

Curing

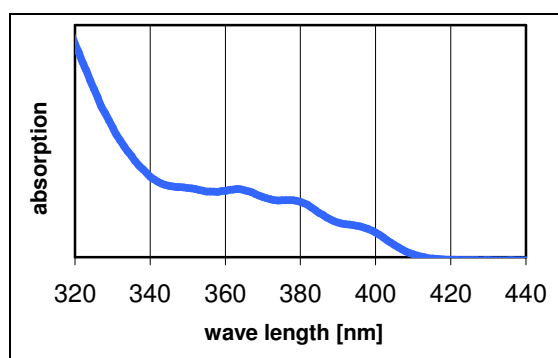
- with UV light or visible light in a wavelength range of 320 - 420 nm (primary curing mechanism) and by humidity in shadow zones (secondary curing mechanism)
- humidity curing starts at the surface of the acrylate; a skin is formed after a few hours; deep curing speed of the acrylate is approx. 2mm/24h

Lamp type	DELOLUX 20 / 50 / 80		
Wavelength [nm]	365	400	460
Suitability	+	++	-

- not suitable + suitable ++ especially suitable

Absorption spectrum

- photoinitiation system in acrylate matrix



Curing parameters

- dependent on material thickness and absorption, adhesive layer thickness, lamp type and distance between lamp and adhesive layer
- at the adhesive, the effective curing intensity should lie between 50 and 200mW/cm² taking into consideration the transmittance of the joining parts

Additional technical information

<http://www.delo.de/delo/3QRT7/?1MLnrb1a>

Technical data

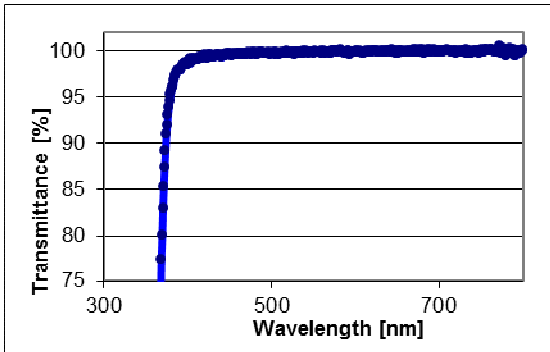
<i>Color</i> cured in a layer thickness of approx. 0.1 mm	colorless clear
Density [g/cm ³]	1.0
<i>Viscosity</i> [mPas] at 23 °C, rheometer	1100
Recommended irradiation time [s] DELO-Standard 23, LED 400nm, intensity: 60 mW/cm ² DELOLUXcontrol	20
Recommended irradiation time [s] DELO-Standard 23, LED 400nm, intensity: 200 mW/cm ² DELOLUXcontrol	15
<i>Stud pull strength glass/glass</i> [MPa] DELO Standard 48	0.6
Shear modulus [kPa] DELO Standard 45	81
Shore hardness 00 DIN 53505	41
Shrinkage [vol. %] DELO Standard 13	2.7
Water absorption [weight %] DIN EN ISO 62, 24 h at room temperature (approx. 23 °C)	1.8
initial b* value DELO Standard 25	1.7
Index of refraction cured product	1.471

Dielectric constant 6
relative permittivity ϵ_r
RF I-V method, extrapolated value at 1 MHz

Glass transition temperature [°C] -55
DMTA

Haze [%] 0.7
ASTMD1003, Haze-Gard plus, 1mm layer thickness

Transmittance



Storage life at room temperature in original container 4 weeks

Storage life 3 months
at 0°C to +10°C in unopened original container

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. It is the customer'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. The data and information provided are therefore no guarantee for specific product properties or the suitability of the product for the intended purpose.

Nothing contained herein shall be construed to indicate the non-existence of any relevant patents or to constitute a permission, encouragement or recommendation to practice any development covered by any patents, without permission of the owner of this patent.

All products provided by DELO are subject to DELOs' General Terms of Business. Verbal side agreements are not permitted. This document is subject to change.

Instructions for use

The instructions for use of DELO-DUALBOND 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

The properties in italics are part of the specification. Ranges with clear limits are defined for them and others, where applicable. In the course of the QA test, each batch is tested for these properties and the maintenance of the limits is ensured. The measuring methods used can deviate from those specified in the data sheet. Details can be found in the QA test report.