

# Luxury Goods – Flacon Bonding | Material Selection Guide

Product	Product group	DELO PHOTOBOND		
	Product code	AD491	PB437	4496
General	Adhesive type	light-curing		
	Standard product	✓	✓	✓
	Basis	acrylate	acrylate	acrylate
	Color* in 0.1 mm layer thickness	colorless clear	colorless clear	yellowish clear
	Fluorescence	–	–	–
Curing	Curing mechanism	UV- and light-curing		
	Min. irradiation time [s]	7 UVA intensity 60 mW/cm <sup>2</sup> 3 LED intensity 200 mW/cm <sup>2</sup>	6 UVA intensity 60 mW/cm <sup>2</sup> 3 LED intensity 200 mW/cm <sup>2</sup>	50 UVA intensity 60 mW/cm <sup>2</sup> 26 LED intensity 200 mW/cm <sup>2</sup>
	Recommended preactivation time	–	–	–
	Curing specialties	very fast light fixation at least one component must be translucent		
	Curing time until initial strength	–	–	–
	Curing time with heat	–	–	–
	Special values	Viscosity [mPas]	90,000	8,000
Young's modulus [MPa]		400	520	–
Elongation at tear [%]		150	110	300
Water absorption [%]		1.0	1.0	0.7
Properties	Special features of product	high-viscous and flexible	fast curing high strength	soft and flexible
	Applications	plates and decorative elements to glass bottles can be used on many substrates	plastic or glass to glass can be used on many substrates	for plastics that are difficult to bond, e.g. Surlyn impact- and vibration-resistant can be used on many substrates
	Available container sizes	900 g cartridge	30 g cartridge 1,000 g bottle	50 g   1,000 g bottle

DELO PHOTOBOND			DELO DUALBOND	DELO KATIOBOND	DELO-DUOPOX
GB368	GB422	LA4875	AD4950	4578	03 rapid
light-curing		UV- and light-activated	dual-curing	light-activated	two-component
✓	✓	✓	✓	✓	✓
acrylate	acrylate	mod. urethane polymer	acrylate	epoxy	epoxy
colorless clear	colorless clear	colorless	colorless	brown milky	yellowish
–	✓	✓	–	–	–
UV- and light-curing		light-activated humidity curing	light- and humidity-curing	light-activated	room-temperature-curing
15	9	–	10	60 UVA intensity 60 mW/cm <sup>2</sup> 11 LED intensity 200 mW/cm <sup>2</sup> at +30°C	–
–	–	4 s LED intensity 400 nm, 200 mW/cm <sup>2</sup> , 500 µm layer thickness	–	2 s UVA intensity, 60 mW/cm <sup>2</sup>	–
very fast light curing at least one component must be translucent		for bonding opaque components, the adhesive can be preactivated by light prior to component fixation	for applications where light curing is only conditionally possible as parts of the bonding area are not accessible by light light fixation necessary	for bonding opaque components, the adhesive can be preactivated by light prior to component fixation	for bonding opaque components
–	–	–	–	–	11 min
–	–	–	–	–	–
5,700	5,000	70,000	36,000	12,400	comp. A: 13,000 comp. B: 18,000
900	50	< 100	45	900	2,000
17	370	270	270	3	19
0.5	1.5	1.5	2.5	0.9	1.0
dry surface humidity-resistant	flexible and humidity-resistant, also on plastic easy application control by fluorescence good adhesion to PA and glass good resistance in +15°C/90% r.h. tests	preactivated, humidity-curing in shadowed areas in 48 h	humidity-curing in shadowed areas in 24 h	preactivated high media resistance	very fast two-component adhesive
predominantly for glass-to-glass and glass-to-metal bondings	glass and plastic components into caps can be used on many substrates	laminar or bead-shaped bondings plastic to glass	for plastics that are difficult to bond, e.g. Surlyn can be used on many substrates	can be used on many substrates	metal or plastic to glass can be used on many substrates
50 g   1,000 g bottle	1,000 g bottle	40 g   800 g cartridge	30 g   600 g cartridge	1,000 g bottle	55 g DELO-AUTOMIX double chamber cartridge

AD = Adhesive GB = Glass Bonding LA = Light-Activated PB = PHOTOBOND

## Application examples



Bonding of a glass element to a glass bottle



Bonding of a metal frame to a glass bottle



Bonding of a plastic element to a glass bottle



Bonding of top and bottom part of a glass cap



Bonding of a metal frame to a glass cap



Bonding of a plastic frame to a glass cap

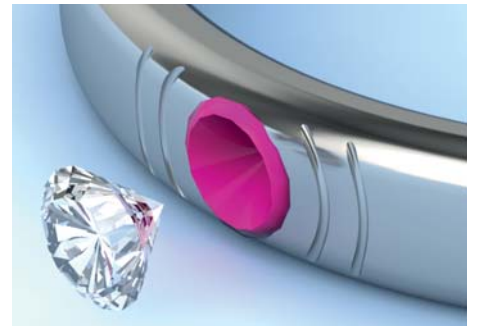
# Luxury Goods – Jewelry Bonding | Material Selection Guide

Product	Product group	DELO PHOTOBOND		
	Product code	GB368	4494	AD494
General	Adhesive type	light-curing		
	Standard product	✓	✓	✓
	Basis	acrylate	acrylate	acrylate
	Color	colorless clear	colorless clear	colorless clear
Curing	Curing mechanism	UV- and light-curing		
	Min. irradiation time [s]	15 UVA intensity 60 mW/cm <sup>2</sup>	7 UVA intensity 60 mW/cm <sup>2</sup> 3 LED intensity 200 mW/cm <sup>2</sup>	14 UVA intensity 60 mW/cm <sup>2</sup> 9 LED intensity 200 mW/cm <sup>2</sup>
	Curing specialties	very fast light curing at least one component must be translucent		
	Curing time until initial strength	–	–	–
	Curing time with heat	–	–	–
	Special values	Viscosity [mPas]	5,700	20,000
Young's modulus [MPa]		900	400	20
Elongation at tear [%]		17	160	310
Water absorption [%]		0.5	1.3	3.0
Properties	Special features of product	dry surface humidity-resistant	fast curing high strength	high-viscous and flexible
	Applications	predominantly for glass-to-glass and glass-to-metal bondings	metal to glass can be used on many substrates	can be used on many substrates
	Available container sizes	50 g   1,000 g bottle	30 g   600 g cartridge	30 g   600 g cartridge

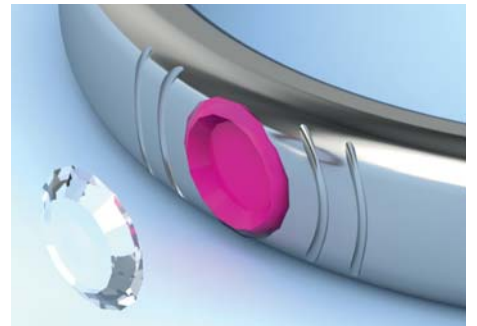
DELO DUALBOND		DELO-ML	DELO MONOPOX	DELO-DUOPOX
GE4913	AD4930	DB133	SJ2735	CR8021
dual-curing		dual-curing	heat-curing	two-component
–	✓	✓	✓	✓
acrylate	acrylate	mod. urethane acrylate	epoxy	epoxy
colorless clear	yellowish	colorless	colorless transparent	yellowish transparent
UV- / light- and humidity-curing		anaerobic- and UV-curing	heat-curing	room-temperature-curing
17 LED intensity 200 mW/cm <sup>2</sup>	5 UVA intensity 60 mW/cm <sup>2</sup> 3 LED intensity 200 mW/cm <sup>2</sup>	25 UVA intensity 60 mW/cm <sup>2</sup>	–	–
for applications where light curing is only conditionally possible as parts of the bonding area are not accessible by light light fixation necessary		anaerobic-curing for bonding opaque components	pure heat curing	for bonding opaque components
–	–	3 – 6 min	–	15 min @ +80°C in convection oven
–	–	–	20 min @ +130°C 2 h @ +90°C	–
1,300	14,000	700	50,000	comp. A: 34,000 comp. B: 10,000
–	30	300	3,000	100
–	45	130	4	35
–	0.6	–	0.2	0.5
humidity-curing in shadowed areas in 24 h decelerated humidity curing results in longer processing time at room lighting	humidity-curing in shadowed areas in 24 h	various curing possibilities: light, heat, anaerobic with activator	impact-resistant good media resistance	two-component adhesive
preferably for glass-to-glass and glass-to-metal bondings also for laminar plastic bonding	can be used on many substrates, e.g. plastic, glass, metal	preferably for metal, glass and polyamide bondings	metal to metal plastic to metal	metal or plastic to glass can be used on many substrates
600 g cartridge (minimum order quantity 25 kg)	30 g   600 g cartridge	50 g   200 g bottle	350 g euro cartridge	53 g DELO-AUTOMIX double chamber cartridge 1,000 g tins (comp. A+B)

AD = ADhesive CR = Casting Resin DB = Dual Bonding GB = Glass Bonding GE = General Encapsulant

## Application examples



Bonding of a gemstone with coated sharp back into a socket



Bonding of a gemstone with coated flat back into a socket



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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. 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 DELO's General Terms of Business. Verbal ancillary agreements are deemed not to exist.

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