

NEW DELO-ML

High-strength, fast and flexible

Anaerobic adhesives for metal bonding and mixed connections



DELO Industrial Adhesives
 ► Germany · Windach/Munich
 Phone +49 8193 9900-0
 info@DELO.de
 www.DELO.de

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Your benefits at a glance:

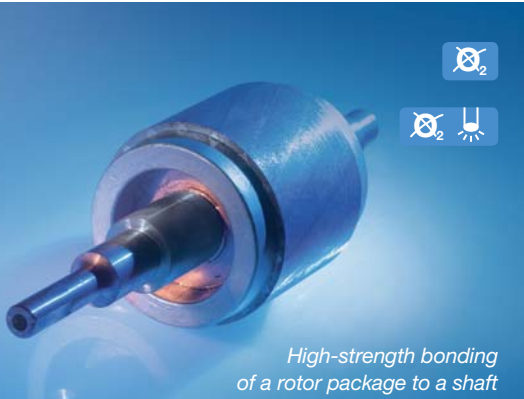
- Extensive consultation on your specific bonding task
- Specific adhesive selection
- Sample bondings and tests
- Documentation of all test and measuring results

Which adhesive for which application?

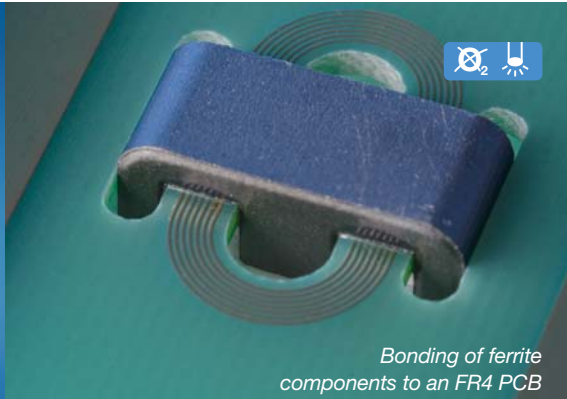
	DELO-ML					
	5327	UB160	DB133	DB135/DB136	DB180	DB154
High flexibility	–	–	+++	++	++	+
High temperature range of use	+++	++	+	++	++	++
High strength	+++	+++	++	+++	+++	+++
Tension-equalizing	–	–	+++	++	++	+
Dual-curing	–	–	✓	✓	✓	✓
	anaerobic curing		anaerobic UV-curing with UV light (320–380 nm)	anaerobic light-curing with UV light or visible light (320–450 nm)		
Color	green		colorless	clear-yellowish DB136, DB180: fluorescent		yellow fluorescent
Viscosity [mPas] at +23 °C	300	10,000	700	1,200	17,000	6,000
Curing time until initial strength [min] at rt (approx. +23 °C), anaerobic with Znph screws	2–4	2–4	3–6	2–4	3–6	2–4
Min. irradiation time [s] DELO Standard 23	–	–	25	10	10	6
Off-torque [Nm] with Mon 46 Nm	70	70	55	60	60	65
Compression shear strength [MPa] according to ISO 10123	33	40	28	40	40	35
Tensile shear strength [MPa] Al/Al	11	8	12	13	13	13
DIN EN 1465, sand-blasted St/St	16	14	14	16	14	16
Elongation at tear [%] DIN EN ISO 527	n. d.	n. d.	130	30	40	4
Temperature range of use [°C]	–60 to +200	–60 to +180	–40 to +120	–60 to +180	–60 to +180	–60 to +180

DB = Dual Bonding UB = Universal Bonding
 n. d. not determinable

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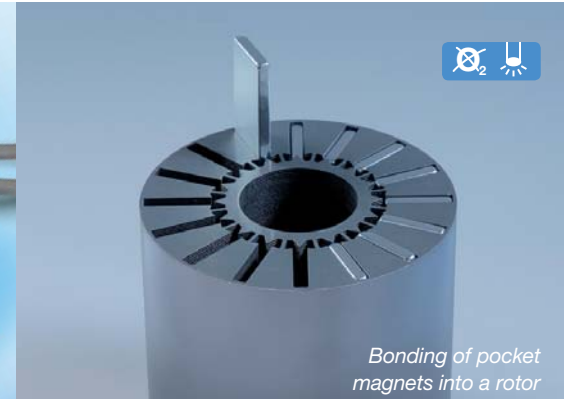
High-strength bonding of a rotor package to a shaft



Bonding of ferrite components to an FR4 PCB



Bonding of a steel stator to an aluminum housing; figure: ebm-papst



Bonding of pocket magnets into a rotor

DELO-ML 5327 DELO-ML UB160 DELO-ML DB154

Application areas

- High-strength metal bonding
- Multi-purpose
- Securing, bonding and sealing

Properties

- DELO-ML 5327: low-viscous, good flow behavior
- DELO-ML UB160: specific high-viscous setting
- DELO-ML DB154: light fixation possible, tension-equalizing
- Very fast anaerobic curing
- High strength
- High temperature stability

Application examples

- Ferrite and magnet bonding
- Stator bonding
- Shaft-to-hub connections
- Screw securing
- Thread sealing / bonding

DELO-ML DB133

Application areas

- Impact-resistant bonding
- Mixed metal-to-plastic bondings
- Fast fixing of components by UV light
- Ideal for laminar bonding

Properties

- High-strength
- Impact-resistant
- Tension-equalizing, elongation at tear up to 130 %
- UV curing possible, therefore insensitive to ambient light
- Good flow behavior

Application examples

- Ferrite and magnet bonding
- Stator bonding
- Sensor bonding
- Deep-drawn components (smooth surfaces)

DELO-ML DB135 DELO-ML DB136

Application areas

- Impact-resistant metal bonding
- Impact-resistant mixed connections
- Components with dissimilar coefficients of thermal expansion
- Fast fixing of components by UV or visible light

Properties

- Tension-equalizing, elongation at tear up to 30 %
- DELO-ML DB136: Easy application control thanks to fluorescence
- Good flow behavior
- High-strength

Application examples

- Ferrite and magnet bonding
- Stator bonding
- Sensor bonding
- Screw securing
- Deep-drawn components (smooth surfaces)

DELO-ML DB180

Application areas

- Tension-equalizing metal bonding
- Tension-equalizing mixed connections
- Components with dissimilar coefficients of thermal expansion
- Applications on vertical surfaces
- Fast fixing of components by UV or visible light

Properties

- Specific high-viscous setting
- Flexible at permanently high temperatures
- Easy application control thanks to fluorescence
- High-strength

Application examples

- Ferrite and magnet bonding
- Stator bonding
- Sensor bonding
- Screw securing
- Deep-drawn components (smooth surfaces)