

TECHNICAL INFORMATION

BEST-MK 1812

BEST-MK 1812 is a one component, solvent free, high strength and capillary anaerobic curing adhesive based on Dimethacrylate ester. The viscosity is very low. In addition to the anaerobic curing the adhesive can be cured in a very short time with exposure to light of 400 to 500 nm.

BEST-MK 1812 is especially designed for series production and for other applications where a fixture time of a few seconds is necessary. The adhesive is recommended for bonding of coaxial parts like bushings and bearings, shaft to collar connections, for sealing of gaps up to 0,05 mm in metal parts, for fastening and sealing of thread joints up to a thread size of M5 and for sealing of cast iron parts. Due to the retarded curing the adhesive is suitable for application with dosing equipment. The fast curing with light minimizes waiting times. Parts in shady areas will cure anaerobically. Due to the good capillary action the adhesive is suitable for later application. Therefore timesaving repairs can be made without loosening the connection.

BEST-MK 1812 combines high strength with excellent chemical resistance. The “break loose” moment is very high. Therefore in case of disassembly of thread connections it is possible that the screw can break or the thread is damaged. The low viscosity provides a good capillary action which supports a good distribution of the adhesive on the to be bonded surfaces. The adhesive is especially recommended for later application. Due to the low viscosity the adhesive fills in gaps and very fine hairline cracks and cures in place. Fixture time in seconds can be reached by exposure to light with 400 – 500 nm.

PROPERTIES (liquid product)

Chemical Type	Dimethacrylate ester
Curing system	anaerobic/light
Color	yellow/clear
Strength	high
Viscosity (Brookfield 25°C)	5 – 20 mPas
Density (DIN EN 542)	1,1 x 10 ³ kg/m ³
Thread sizes up to	M5
Bonding gap	0,01 – 0,05 mm
Thread friction	0,17
<u>Shelf life in unopened original container</u> (Storage temperature at 8 to 21°C)	1 year
<u>Shelf life in unopened original container BULK</u> (Storage temperature at 8 to 16°C)	3 months

CURING TIME @ 23°C

Fixture time anaerobic	5 - 15 min
Fixture time with light	20 -40 seconds
Functional strength	3 - 5 hrs.
Final strength	10 hrs.

STRENGTH VALUES (cured product)

Compression/shear strength (DIN EN 15337)	25 N/mm ²
Breakloose Moment (DIN EN 15865)	21 Nm
Breakaway Moment (DIN EN 15865)	45 Nm
Temperature range	-60°C - +150°C

ENVIRONMENTAL AND CHEMICAL RESISTANCE

(DIN 53287 - test in accordance to DIN EN 15865)

in % of the initial strength after 1000h Chemical absorption

Water/Glycol at	87°C 90%
Motor Oil (MIL-L-46 152) at	125°C 100%
Unleaded Gasoline at	23°C 95%
Brake fluid at	23°C 95%
1,1,1 Trichlorethane at	23°C 95%
Ethanol at	23°C 100%
Acetone at	23°C 95%

For resistance against other chemicals, please check the chemical resistance listing.

Industrial health and safety standards

Hazard Statements: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. For further information please see corresponding material safety data sheets. General knowledge for safe handling of chemicals are recommended. Please consult the EU – Safety Data Sheet for further information.

General

The data and information above correspond to the current know-how of BEST-Klebstoffe GmbH & Co. KG. Our information and data have been developed from laboratory tests and extensive practical experience. They shall not release any customer from its duty to perform receiving inspections and to do test runs in view of any intended use, nor do they constitute a representation that any product will have specific properties or be suitable for any definite use. BEST-Klebstoffe GmbH & Co. KG reserves the right to change the contents of this document as necessary.

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