LOXEAL ENGINEERING ADHESIVES
UNI EN ISO 9001 - UNI EN ISO 14001
Registered Quality and Environment Management System Company

Technical Data Sheet

LOXEAL 83-52

Description

High strength anaerobic adhesive for locking and sealing of studs, nuts, bolts and threaded fasteners not requiring dismantling.
Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons, and many chemicals.
Suitable for slip and press fittings.
Designed to improve the operating conditions, they are not labelled as hazardous products, according to actual directive on dangerous products.

Physical properties

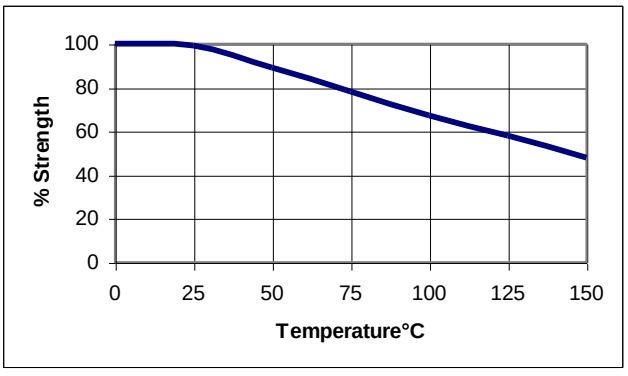
Composition :	anaerobic methacrylate resin
Colour :	green
Viscosity (+25°C - mPa s) :	450 - 650
Specific weight (+25°C - g/ml) :	1,1
Flash point :	> +100°C
Shelf life +25°C :	1 year in original unopened packaging
Max diameter of thread/ gap filling :	M 20 - 0,15 mm

Curing performance

Curing rate depends on the assembly clearance, material surfaces and temperature. Functional strength is usually reached in 1 - 3 hours and full curing takes 24 - 36 hours. In case of passive surfaces and/or low temperature a fast cure can be obtained using Loxeal activator 11, even if its use may reduce the final strength.

Environmental resistance

The graph below shows the mechanical strength vs. temperature.
Steel specimen - ISO 4587



Curing properties

Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C

Handling cure time :	20 - 40 minutes
Functional cure time :	6 - 12 hours
Full cure time :	24 - 36 hours
Locking torque (ISO 10964)	
- breakaway :	25 - 35 N m
- prevailing :	50 - 60 N m
Shear strength (ISO 10123) :	10 - 20 N/mm²
Temperature range :	-55°C/+ 150°C

Chemical resistance

Aged at indicated temperature under conditions below after 24 hours from polymerization.

Substance	°C	Resistance after 100 h	Resistance after 500 h	Resistance after 1000 h
Motor oil	125	good	discrete	discrete
Gear box oil	125	good	discrete	discrete
Gasoline	25	excellent	good	good
Water/glycol 50%	87	excellent	excellent	excellent
Brakes oil	25	excellent	excellent	excellent

For information on resistance with other chemicals, contact Loxeal Technical Service

Directions for use

The product is recommended for use on metal surfaces.
Clean and degrease parts before bonding with Loxeal Cleaner 10.
Apply product to fill completely the gap, assemble parts and hold on for curing time. Liquid product can damage coating, some plastics and elastomers and late stress-cracking events might be induced if used with some thermoplastics.
For application on non metal materials, contact Loxeal Technical Service. For disassembly, use normal tools and eventually heat pieces at +150/+250°C, remove any residue of cured product mechanically and clean parts with Acetone.

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Storage

Keep product in a cool and dry room at temperature of +5/ +25°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact Loxeal Technical Service

Safety and handling

Consult Material Safety Data Sheet before use.

Note

The data contained herein, obtained in Loxeal laboratories, are given for information only; if specifics are required, please contact Loxeal Technical Department. Loxeal ensures abiding quality of supplied products according to its own specifics. Loxeal cannot assume responsibility for the results obtained by others which methods are not under Loxeal control. It is user's responsibility to determine suitability for user's purpose of any product mentioned herein. Loxeal disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loxeal products. Loxeal specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits**.**

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