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## LOXEAL 83-54

### Description

High strength anaerobic adhesive for locking and sealing of studs, nuts, bolts and threaded fasteners not requiring dismantling. It can be used on all metals, either in free or forced mating. It provides temperature resistance up to +200°C and high unscrewing strength. Highly resistant to heat, corrosion, vibrations, water, gases, oils, hydrocarbons, and many chemicals.

### Typical physical properties

Composition:	anaerobic methacrylate
Colour:	green
Viscosity (+25°C - mPa s):	
- Brookfield, Girante 2, 20rpm	600
Specific weight (+25°C - g/ml):	1,1
Fluorescence:	under blue light
Max diameter of thread/ gap filling:	M 20/0,15 mm
Flash point:	> +100°C
Shelf life +25°C:	1 year in original unopened packaging

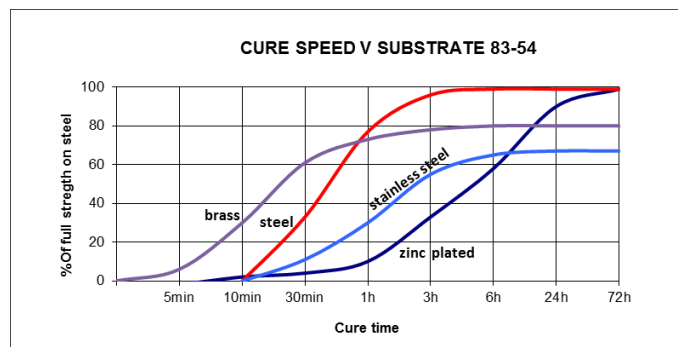
### Typical curing properties

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.

Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C:  
 Handling cure time: 15 minutes  
 Full cure time: 24 hours

### Cure speed v substrate

The graph hereunder shows the breakaway strength development of the product (with time) on steel nuts/bolts M10 x 20 in comparison with several substrates. Tested in accordance with ISO 10964 at + 25°C.



### Typical properties at +25°C of the cured product after 24 hours at +25°C

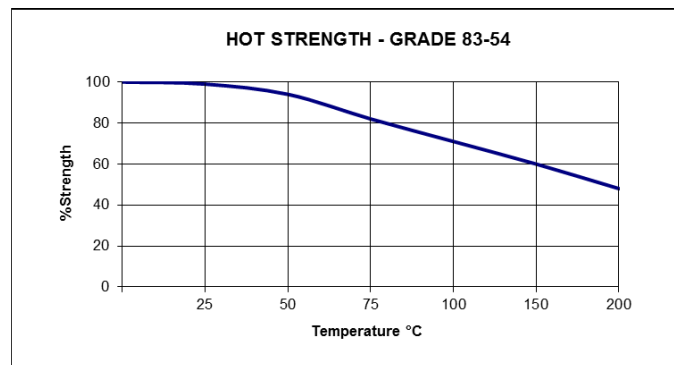
Locking torque (ISO 10964):	
- breakaway:	35 N m
- prevailing:	50 N m
Shear strength (ISO 10123):	18 N/mm <sup>2</sup>
Temperature range:	-55°C/+200°C

### Environmental resistance

#### Hot strength

The graph below shows the mechanical strength vs. temperature.

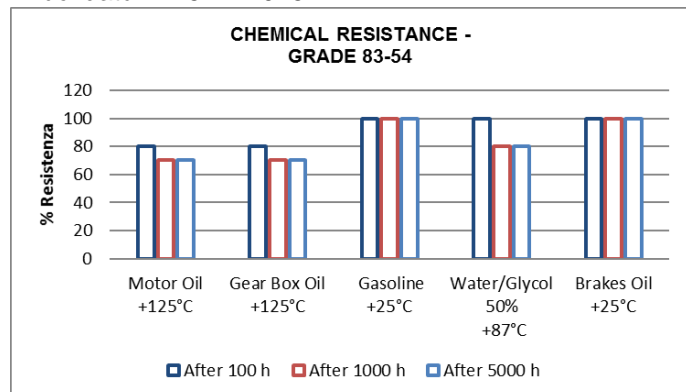
ISO 10964 - Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C - pre-torque 5 N m



## Chemical resistance

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

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

## Directions for use

1. Clean the surfaces with Loxeal Cleaner 10 and allow to dry.
2. For through holes: apply a bead of adhesive across the contact length of the threads. For blind holes: apply several drops of the products down the threads to the bottom of the hole.
3. Assemble and pre-torque as required and allow the parts to achieve functional strength before disturbing them.
4. The usage of Loxeal Activator 11 can be considered to reduce curing time; allow to dry and proceed as per paragraph.

## Disassembly and cleaning

To disassemble the pieces, use conventional tools. When possible, disassembly is made easier by heating pieces at +150°C/+250°C and hot disassembling them. Remove the cured product mechanically and finish cleaning with Acetone.

## Warnings

This adhesive is not approved for usage with neither pure nor with gaseous oxygen. It is not suitable for applications on plastics. The liquid product may damage paints and elastomers. If the product gets in contact, even accidentally, with some thermoplastics, stress cracking of the plastics could happen.

## Storage

Keep product in a cool and dry room at no more than +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, handling and disposal

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 specific standards. 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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