

Description

Medium strength anaerobic adhesive for thread locking of nuts and bolts of all types that require to be dismantled. Suitable to be used on oily surfaces.

Highly resistant to heat, corrosion, vibrations, water, gas, oils, hydrocarbons and many chemicals.

Proven unscrewing resistance at +200°C.

Approved as gas-tight sealant for threaded fittings according to the European norm EN 751-1 (DVGW nr. NG-5146AU0399 and GAZ DE FRANCE).

Approved for potable water (TZW - DVGW).

It keeps sealing properties unchanged between -55°C/+200°C and up to +250°C for short times.

Physical properties

- * Composition : anaerobic methacrylate resin
- * Colour : blue
- * Viscosity (+25°C - mPa s) : 1.700 - 9.000 thixo
- * Friction coefficient μ : about 0,10
- * Specific weight (+25°C - g/ml) : ab. 1,05
- * Fluorescence : under blue light
- * Flash point : > +100°C
- * Shelf life +25°C : 1 year in original unopened packaging
- * Max diameter of thread/gap filling : M36/0,25 mm

Curing performance

Curing rate depends on the assembly gap, substrates 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

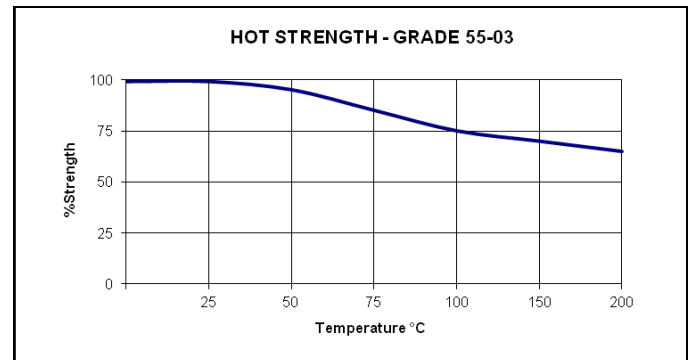
Curing properties

- Bolt M10 x 20 Zn - quality 8.8 - nut h = 0,8 d at +25°C
- * Handling cure time : 10 - 20 minutes
- * Functional cure time : 1 - 3 hours
- * Full cure time : 3 - 6 hours
- * Shear strength (ISO 10123) : 9 - 13 N/mm²
- * Locking torque (ISO 10964)
- breakaway : 18 - 23 N m
- prevail : 9 - 16 N m
- * Temperature range: -55 / +200°C

Environmental resistance

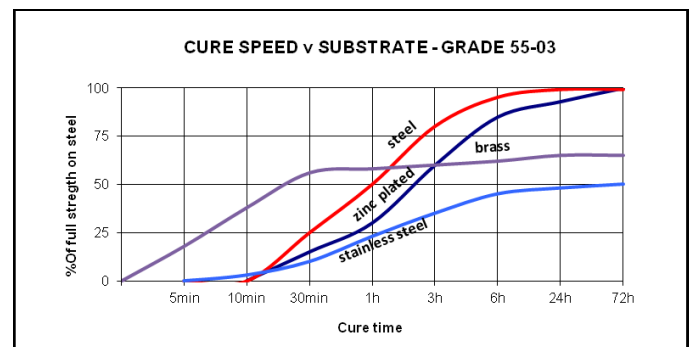
The graph below shows the mechanical strength vs. temperature.

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



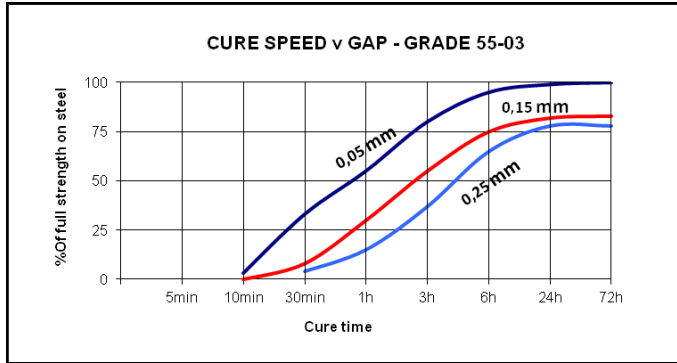
Cure speed v substrate

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.



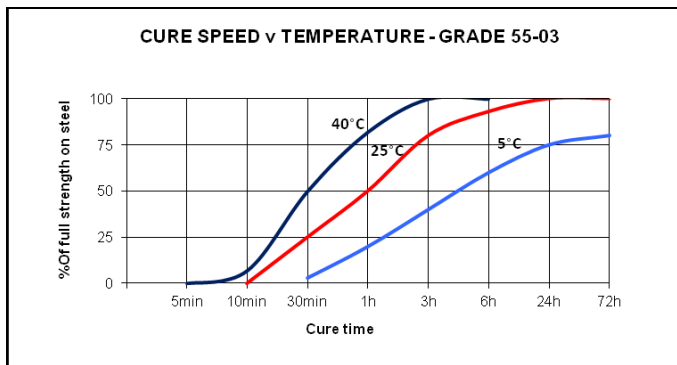
Cure speed v gap

The graph below shows the product shear strength (as %) at different increasing controlled gaps. Steel pins/collars, tested in accordance with ISO 10123 at + 25°C.



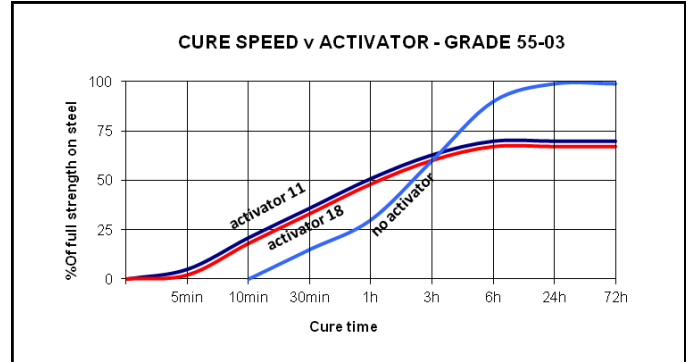
Cure speed v temperature

The following graph shows the breakaway strength of the product (as %) at different temperatures. Steel nuts/bolts M10 x 20, tested according to ISO 10964



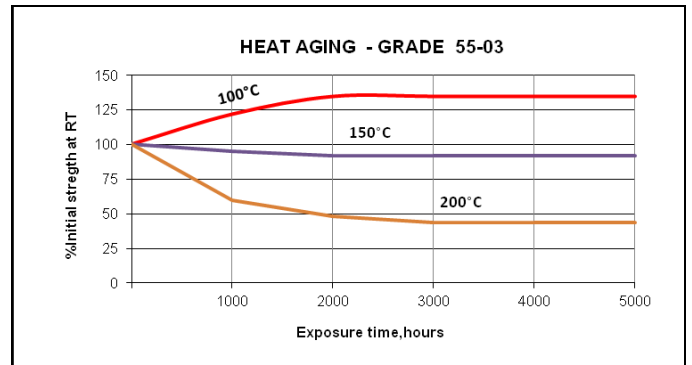
Cure speed v activator

Polymerization could be slowed down by substrate nature, large gaps; cure speed can be improved by applying appropriate activator to the substrate(s). The following graph shows the breakaway strength of the product (as %) and the cure speed developments using our activator 11 and 18 respectively, compared to the ones with no activator. Zn nuts/bolts M10 x 20, tested according to ISO 10964 at a temperature of + 25°C.



Heat aging

The graph below shows the strength resistance behavior as a function of temperature/time. Zn nuts/bolts M10 x 20 - (pre-torque of 5 N m, cured 7 days at +25°C) - aged at temperature indicated and tested at +25°C according to ISO 10964.



Chemical resistance

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

Substance	°C	Resistance after 100 h	Resistance after 1000 h	Resistance after 5000 h
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Motor oil	125	excellent	excellent	excellent
Gear box oil	125	excellent	excellent	excellent
Gasoline	25	excellent	good	good
Water/glycol 50%	87	excellent	good	good
Brake fluid	25	excellent	excellent	good
Ethanol	25	excellent	excellent	excellent
Acetone	25	good	good	good
Biodiesel	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 substrates.
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°C/+250°C, remove any residue of cured product mechanically and clean parts with Acetone

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 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.

DIN-DVGW-Baumusterprüfzertifikat

DIN-DVGW type examination certificate

NG-5146AU0399

Registriernummer
registration number

Anwendungsbereich <i>field of application</i>	Produkte der Gasversorgung <i>products of gas supply</i>
Zertifikatinhaber <i>owner of certificate</i>	LOXEAL s.r.l. Via Marconato, 2, I-20031 Cesano Maderno (MI)
Vertreiber <i>distributor</i>	LOXEAL s.r.l. Via Marconato, 2, I-20031 Cesano Maderno (MI)
Produktart <i>product category</i>	Schmier-/Dicht-/Betriebsmittel: Dichtmittel für herstellerseitig zusammengefügte Gewindeverbindungen in Gasgeräten und Komponenten (5146)
Produktbezeichnung <i>product description</i>	Anerobes Dichtmittel für metallene Gewindeverbindungen in Gasgeräten, Gasanlagen und Wasserheizungsanlagen, nicht zulässig für die Verwendung in der Gas-Installation nach DVGW-TRGI 2008
Modell <i>model</i>	Loxeal 55-03
Prüfberichte <i>test reports</i>	Kontrollprüfung Labor: 09/194/5146/02 vom 13.11.2009 (EBI)
Prüfgrundlagen <i>basis of type examination</i>	DIN EN 751-1 (01.05.1997)

Ablaufdatum / AZ 31.10.2014 / 09-0509-GNV
date of expiry / file no.

24.11.2009 Kö A-1/2

Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle
date, issued by, sheet, head of certification body

DVGW CERT GmbH - von der Deutschen Akkreditierungsstelle Technik (DATech)
in der TGA GmbH akkreditiert für die Konformitätsbewertung von Produkten der
Gas- und Wasserversorgung

DVGW CERT GmbH - accredited by Deutsche Akkreditierungsstelle Technik
(DATech) in the TGA GmbH for conformity assessment of products of gas and
water supply



DAT-ZE-009/96-02

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Typ <i>type</i>	Technische Daten <i>technical data</i>	Bemerkungen <i>remarks</i>
Loxreal 55-03	Klasse: H	für Nennweiten > DN 10 bis DN 50

Verwendungshinweise / Bemerkungen*hints of utilization / remarks*

geeignet für: metallene Gewindeverbindungen für Anwendungen bei groben Gewinden
nicht zulässig für: Verwendung in der Gas-Installation nach DVGW-TRGI 2008