

## LOXEAL 59-10

### Description

Loxéal 59-10 is a single component, medium strength anaerobic sealant with good heat resistance. The product cures at ambient temperature when confined in the absence of air between close fitting metal surfaces.

For sealing of flat mating rigid flange joints of pumps, gearboxes, camshafts blocks, motor flanges. To replace pre-formed gaskets, allows greater machining tolerances, assures metal to metal contacting and dismantling with normal tools. Highly resistant to vibrations, heat, water, gases, LPG, oils, hydrocarbons and many chemicals.

### Physical properties

* Composition:	anaerobic methacrylate
* Colour:	red
* Fluorescence:	under blue light
* Viscosity (25°C - mPa.s):	50.000– 300.000 HT
* Specific weight (25°C - g/ml):	1,05
* gap filling:	0,50 mm
* Flash point:	> 100°C
* Shelf life 25°C:	1 year

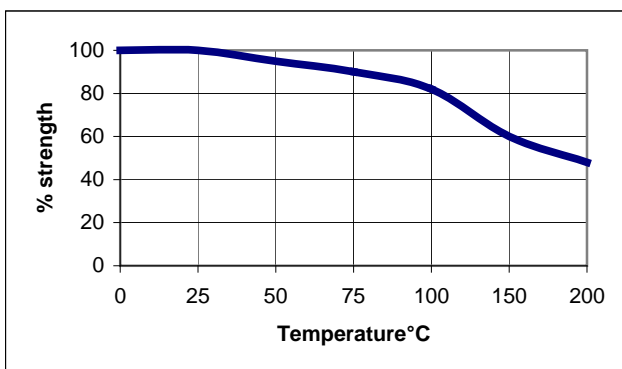
### Curing performance

The rate of cure depends on the substrate used, on the gap and on the temperature. The functional strength is reached usually after 1-3 hours. The full cure takes 24 – 36 hours. In case of passivated surfaces and/or low temperature we recommend the usage of Loxéal Activator 11.

### Environmental resistance

The graph below shows the mechanical strength vs. temperature.

Steel specimen – ASTM 1002/DIN 53283



### Curing properties

Bolt M 10 x 20 - quality 8.8 - Nut h = 0,8.d at 25°C:

* Handling cure time:	15 - 30 minutes
* Functional cure time:	3 - 6 hours
* Full cure time:	6 - 12 hours
* Shear strength (ASTM D-1002):	5 - 10 N/mm <sup>2</sup>
* Tensile strength (ASTM D-2095):	6 - 8 N/mm <sup>2</sup>
* Impact strength (ASTM D-950):	5 - 10 N.mm/ mm <sup>2</sup>
* Temperature range:	-55 +200°C

### Chemical resistance

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

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

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

### Istant Seal

Loxéal 59-10 has the ability to resist low pressure on-line test while uncured.

**Heat Cure**

Heat can be used to effect or accelerate cure when surface priming operations are undesirable. Typical heat cure conditions consist of heating and maintaining bondline at a temperature of 45°C and after one hour more than 70% of strength on steel is achieved.

**Cure Speed Vs.Substrate  
(tested according to ASTM D1002)**

% Full strength	Steel	Aluminium
25	1 hr	2 hrs 30 min
50	2 - 4 hrs	5 hrs
100	24 - 48 hrs	48 - 72 hrs

**Cures Speed Vs.Joint Gap**

% Full strength	Gap 0,05 mm	Gap 0,25 mm
25	1 hr	6 - 12 hrs
50	2 - 4 hrs	12 - 24 hrs
100	24 hrs	48 - 72 hrs

**Cures Speed Vs.Temperature**

% Full strength	Temperature		
	5°C	22°C	40°C
50	12 - 24 hrs	2 - 4 hrs	30 min.
100	48 - 72 hrs	24 - 48 hrs	3 hrs

**Heat aging**

Samples aged 1000 hours at indicated temperature and tested at room temperature.

Test Temp. °C	% retained strength
150°	300%
200°	200%

**Directions for use**

The product is recommended for use on metal surfaces. Clean and degrease parts to bond with Loxeal Cleaner 10. Apply product in enough quantity to fill the gap. Put together parts and wait till product is cured. The product in liquid form may damage coated parts and elastomers and the contact with some thermoplastics may induce stress-crackings non immediately evidenced. For application on non metal parts, 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 pieces with Acetone.

**Storage**

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

**Safety and handling**

Consult Material Safety Data Sheet

**Note**

The data contained herein, obtained in Loxeal laboratories, are given for information only. Loxeal cannot assume responsibility for the results obtained by others which methods are not under Loxeal control. It is the user's responsibility to determine suitability for the 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.