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

# Preliminary technical Data Sheet

## LOXEAL 18-11

### Description

Loxeal 18-11 is a PFAS-free thixotropic anaerobic adhesive, developed for sealing metal threaded joints. It is suitable for sealing against gas, LPG, compressed air, gasoline and oil, industrial fluids, CFC, water, and many chemicals. Once cured, it provides an elastic film and resists to shocks, vibrations, and thermal shocks. It replaces PTFE tapes and hemp, and it is easy to dismantle with normal tools even after years. Loxeal 18-11 is approved for Gas (DVGW, DIN-EN 751-1).
Loxeal 18-11 is a WRAS approved material, as listed, it is suitable for use in contact with wholesome (potable) water. It is also compliant with KTW-BWGL for usage in contact with potable water.

### Typical physical properties

| | |
|---|---|
| Composition: | anaerobic methacrylate resin |
| Colour: | white |
| Viscosity (+25°C - mPa·s) | |
| Brookfield 20 rpm: | 25.000 |
| Brookfield 2 rpm: | 50.000 |
| Specific weight (g/ml): | 1,0 |
| Fluorescence: | under blue light |
| Max diameter of thread/gap filling: | 2”/0,30 mm |
| Shelf life*: | 1 year in unopened packaging at +5°C/+25°C |

*for standard packaging up to 300 ml

### Typical curing performance

Curing time depends on the gap, the materials, and the temperature. In case of passive surfaces, big gaps and/or low temperatures, a faster cure can be obtained using Loxeal Activator 11 or Activator 18.

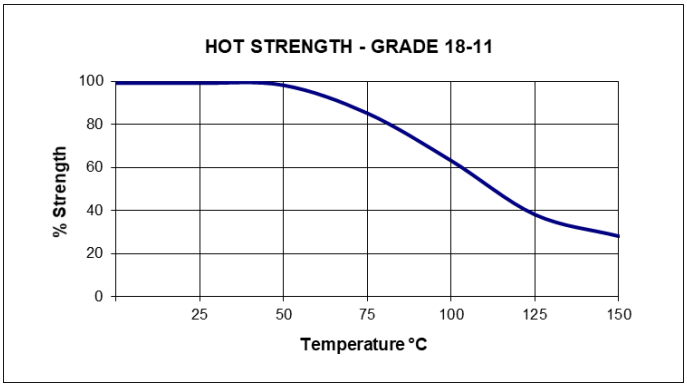
### Typical curing properties

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

| | |
|---|---|
| Handling time: | 20 minutes |
| Locking torque (ISO 10964) | |
| breakaway: | 8 Nm |
| prevailing: | 3 Nm |
| Shear strength (ISO 10123): | 5 N/mm² |
| Tensile strength (ASTM D-2095): | 4 N/mm² |
| Temperature range: | -55°C/+150°C |

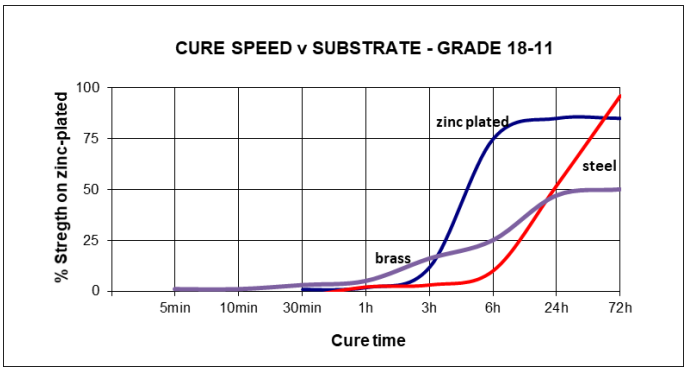
### Environmental resistance
### Hot strength

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




### 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.



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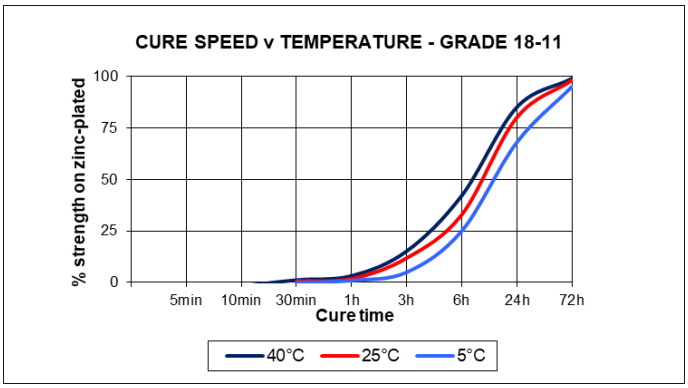
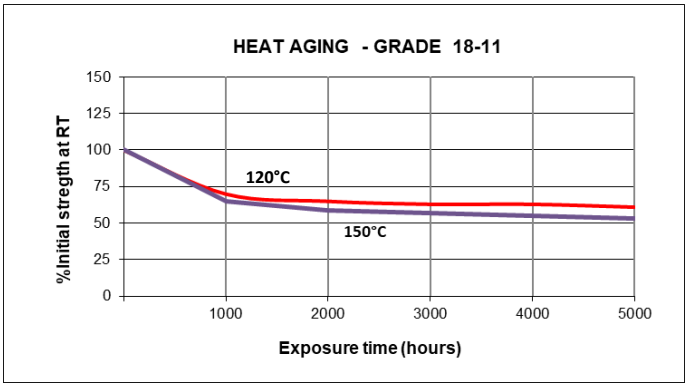
### Cure speed v temperature

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



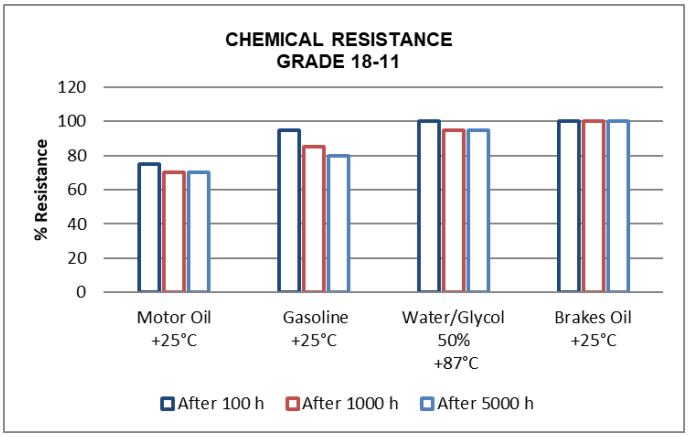

### Heat aging

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




### Chemical resistance

Zn nuts/bolts M10 x 20, cured 7 days at +25°C - aged at the indicated conditions and tested at +25°C according to ISO 10964.




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

### Directions for use

- **Surface preparation**

For best results, we recommend cleaning the surfaces with the spray Loxeal Cleaner 10 and letting dry.

- **Application**

Apply a bead of product along the entire circumference of the male, starting from the second thread, in a sufficient quantity to fill the entire threaded surface.
For high viscosity products on big joints, apply a small amount on the female thread too, to ensure the correct filling of the threaded joint during assembly.

- **Assembly**

Rotate occasionally back and forth during the manual screwing to adjust the distribution of the product on the threads.
Seal the joints with the usual tightening torque by the product's specific handling time. Remove the excess of the uncured adhesives. Do not move the parts until the product is cured.
The full strength is achieved after minimum 24 hours of polymerization.

- **Disassembly and cleaning**

Easy to disassemble with conventional tools. When the disassembly is difficult, for instance in case of big dimension of the bonding area, heat the pieces at +150°C and disassembly the parts while they are still hot.
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.
The liquid product may damage paints and elastomers. If the product gets in the contact, even accidentally, with some thermoplastics, stress cracking of the plastics could happen. For applications on non-metallic materials, contact Loxeal Technical Service.

### Storage

Keep the product in a cool and dry room at temperatures between +5°C and +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 the Material Safety Data Sheet before use.



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**Note**

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