Technical Data Sheet

# LOCTITE® High Flex Gasket Maker

October 2019

## PRODUCT DESCRIPTION

LOCTITE® High Flex Gasket Maker provides the following product characteristics:

| | |
|---|---|
| **Technology** | Acrylic |
| Chemical Type | Methacrylate ester |
| Appearance (uncured) | Blue paste[LMS] |
| Components | One component - requires no mixing |
| **Cure** | Anaerobic |
| **Application** | Sealing |
| Product Benefits | • Improves reliability<br>• Cost effective<br>• Easy application |

LOCTITE® High Flex Gasket Maker improves flange-sealing reliability by overcoming the shortcomings of precut and other formed -in-place chemical gaskets. After curing between mating metal flanges and filling surface imperfections, it provides a tough, resilient, solvent and temperature resistant seal that flexes with flange movements caused by vibration, pressurization or thermal changes.

Typical applications include making gaskets for pumps, housings, axle covers, gear cases, split crankcases and other areas where conventional gaskets are used. LOCTITE® High Flex Gasket Maker can also be used to repair damaged conventional gaskets or as a coating/ dressing for conventional gaskets.

### Product Benefits

- **Improved Reliability**
- -Seals all surface gasket imperfections
- -Eliminates gasket compression set and bolt loosening
- -Seals most common industrial fluids
- -No cracking or shrinking during cure
- **Cost Savings**
- -Reduces cut gasket inventory
- -Reduces machining operations
- -Eliminates costly re-torquing operations
- -No waste from cure in open containers
- **Easy Application**
- -No migration, can be applied to vertical surfaces
- -No mixing required
- -No curing outside joint or in open containers
- -Can be applied via screen printing, roll coating and manual or robotic tracing

## TYPICAL PROPERTIES OF UNCURED MATERIAL

| | |
|---|---|
| Specific Gravity @ 25 °C | 1.1 |
| Flash Point - See SDS | |
| Viscosity, Brookfield - HBT,22°C,mPa·s (cP): | |
| Spindle TC, speed 0.5 rpm, Helipath | 225,000 to 575,000[LMS] |
| Spindle TC, speed 5 rpm, Helipath | 65,000 to 175,000[LMS] |

## TYPICAL CURING PERFORMANCE

### Fixture Time

Fixture time is defined as the time to develop a shear strength of 0.1 N/mm² .

Fixture Time, ISO 4587, minutes:

| | |
|---|---|
| Passivated aluminum: | |
| 0 gap | 15 to 20 |
| 0.05 mm gap, 1 side activated with Activator 7649™ | 1 to 2 |
| 0.25 mm gap, 1 side activated with Activator 7649™ | 60 to |
| Passivated steel: | |
| 0 gap | >120 |
| 0.05 mm gap, 1 side activated with Activator 7649™ | 5 to 10 |
| 0.25 mm gap, 1 side activated with Activator 7649™ | 90 to 120 |

## TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 24 hours @ 200 °C

**Physical Properties**:

| | | |
|---|---|---|
| Elongation, at break, ISO 527-3, % | | 64 |
| Tensile Strength, ISO 527-3 | N/mm² | 1.7 |
| | (psi) | (240) |

## TYPICAL PERFORMANCE OF CURED MATERIAL

### Adhesive Properties

Cured for 24 hours @ 22 °C

Lap Shear Strength, ISO 4587:

| | | |
|---|---|---|
| Steel: | | |
| 0 gap | N/mm² | ≥2[LMS] |
| | (psi) | (≥290) |
| 0.25 mm gap | N/mm² | 2.1 |
| | (psi) | (300) |
| Aluminum: | | |
| 0.25 mm gap | N/mm² | 1.2 |
| | (psi) | (175) |
| Passivated steel: | | |
| 0.05 mm gap, 1 side activated with Activator 7649™ | N/mm² | 0.7 |
| | (psi) | (100) |

| | | |
|---|---|---|
| 0.25 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 1.8 (260) |
| Passivated aluminum: | | |
| 0.05 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 0.9 (130) |
| 0.25 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 1.4 (210) |
| Tensile Strength, ISO 6922: | | |
| Steel pin to Steel pin | N/mm² (psi) | 0.8 (110) |
| 180° Peel Strength, ISO 8510-2: | | |
| Steel | N/mm (lb/in) | 0.85 (4.9) |

Cured for 24 hours @ 93 °C

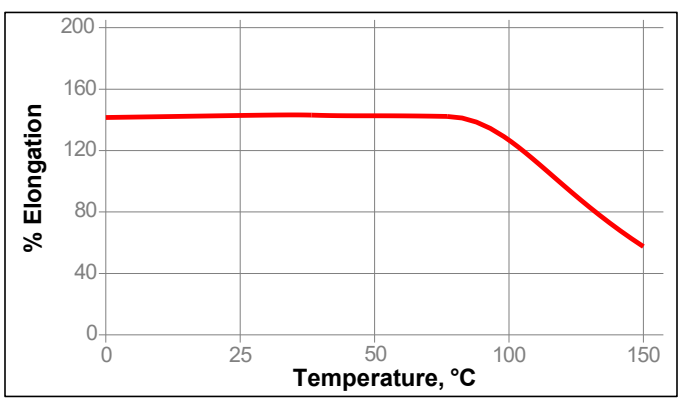
| | | |
|---|---|---|
| Lap Shear Strength, ISO 4587: | | |
| Passivated steel: | | |
| 0.05 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 3.1 (455) |
| 0.25 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 2.4 (345) |
| Passivated aluminum: | | |
| 0.05 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 4.2 (605) |
| 0.25 mm gap, 1 side activated with Activator 7649™ | N/mm² (psi) | 2.2 (325) |

## TYPICAL ENVIRONMENTAL RESISTANCE

### Elongation after Heat Aging

Type 4 Dog bones, UV cured (70,000 microwatts/cm² ), 20 seconds/side. Conditioned 24 hours at temperature

NOTE: LOCTITE® High Flex Gasket Maker is not a UV-curable product.
The method for determining elongation at break involves adding a photo-initiator to the adhesive and curing with a UV lamp to provide a cured sheet of material. The dog bones used for testing are then cut from the sheet.




## GENERAL INFORMATION

**This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.**

**For safe handling information on this product, consult the Safety Data Sheet (SDS).**

### Directions for use:

1. For best performance part surfaces should be clean and free of grease.
2. The product is designed for close fitting flanged parts.
3. LOCTITE® automatic dispensing equipment is recommended for best results. Application by screen printing, roller coating or bead dispense can also be achieved manually.
4. To obtain best results, each application should be evaluated under the specific conditions anticipated for dispensing, performance and durability of the parts.
5. Low pressures (<0.05 MPa, psi) may be used when testing to confirm a complete seal immediately after assembly and before curing.
6. Flanges should be tightened as soon as possible after assembly to avoid shimming.

### Loctite Material Specification[LMS]

LMS dated June 25, 2007. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

### Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.
**Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties**. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

## Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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