



LOCTITE® Graphite-50 Anti-Seize

December 2006

PRODUCT DESCRIPTION

LOCTITE® Graphite-50 Anti-Seize provides the following product characteristics:

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|--------------------|------------------------------------|
| Technology | Graphite-Based |
| Appearance | Dark gray paste ^{LMS} |
| Components | One component - requires no mixing |
| Cure | Non-curing |
| Application | Anti-seize |

LOCTITE® Graphite-50 Anti-Seize is a thread lubricant formulated from synthetic graphite and petrolatum. It is a non-metallic lubricant; but shows good electrical conductivity in metal-to-metal joints. Use on machine threads, tapered pipe threads, for press-fit and slip-fit joints. This product is typically used in applications with an operating range of -29 °C to +482 °C.

TYPICAL PROPERTIES

| | |
|-------------------------------|----------------------------|
| Specific Gravity @ 25 °C | 1.18 |
| Flash Point - See MSDS | |
| Penetration, ISO 2137, 1/10mm | 310 to 360 ^{LMS} |
| Weight Per Gallon, lbs/gal | 9.5 to 10.4 ^{LMS} |

TYPICAL PERFORMANCE

An anti-seize lubricant used on a bolt helps to develop greater clamp load for the same torque compared to an unlubricated bolt. An additional benefit is greater uniformity in clamp load among a series of bolts. The relationship between torque and clamp load is expressed in the following equation:

$$T = K \times F \times D$$

- T = Torque (N·m, lb.in, lb.ft)
- K = Torque coefficient or nut factor, determine experimentally
- F = Clamp load (N, lb.)
- D = Nominal diameter of bolt (mm, in.)

| | |
|---|------|
| Torque coefficient, k: 12.7 mm steel bolts (grade 8) and nuts (grade 5) | 0.13 |
| 12.7 mm steel bolts (grade 8) and nuts (grade 5), solvent cleaned, not lubricated | 0.27 |

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 Material Safety Data Sheet (MSDS).

Directions for use

1. Before or during assembly, wipe or brush onto threads and other joint surfaces needing protection.
2. Use full strength. Do not thin.

Loctite Material Specification^{LMS}

LMS dated October 17, 2000. 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

Note

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Reference 0.0