LOCTITE® Moly Dry Film Lubricant is a molybdenum-disulfide based solid film lubricant. It is a heavy-duty lubricant used for general plant maintenance, metal working trade, machinery manufacturers and manufacturers of military and commercial jet engines. For continuous use in sliding friction, at temperatures from -29 °C to +400 °C. For anti-seize lubrication, LOCTITE® Moly Dry Film Lubricant functions from -29 °C to +1315 °C. Typical applications include:

- Maintenance - threaded lubricant, dry bearing surfaces, slides, guides, pins, conveyor chains, exposed "dry" gears, flexible shafts, press fits, valve stems, shaft/packing wear-in, "easy-off" coating for boiler exhaust surface deposits, power transmission couplings,
- Production - swaging, metal forming, cold extrusion, warm extrusion, cold and warm headings, "dry" lubricant for mechanical linkages,
- Automotive, Heavy Equipment - cam wear-in, brake mechanisms, cables, gear couplings, Electrical - circuit breakers, rheostats, switches, Petro Chemical - valves, boilers, flanges, dampers.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity @ 25 °C</td>
<td>1.3</td>
</tr>
<tr>
<td>Density @ 25 °C, g/ml</td>
<td>1.29</td>
</tr>
<tr>
<td>Solids/Non-Volatile Content, %</td>
<td>48 to 53%</td>
</tr>
<tr>
<td>Weight Per Gallon, lbs/gal</td>
<td>10.5 to 11.1 lbs/gal</td>
</tr>
<tr>
<td>Coverage, 0.018 mm Dry Film</td>
<td>55.7 m² per 4.5 kg</td>
</tr>
<tr>
<td>Flash Point - See MSDS</td>
<td></td>
</tr>
</tbody>
</table>

**TYPICAL CURING PERFORMANCE**

Any of the following cure schedules will cause LOCTITE® Moly Dry Film Lubricant to thermoset, making it fluid and solvent resistant.

**Cure Schedule**

- @ 260 °C, 0.5 hours
- @ 232 °C, 1.0 hours
- @ 204 °C, 2.0 hours

**Curing Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drying Time @ 25 °C</td>
<td>60 minutes</td>
</tr>
</tbody>
</table>

**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.)

**TYPICAL ENVIRONMENTAL RESISTANCE**

**Fluid Resistance**

An air-dried film of LOCTITE® Moly Dry Film Lubricant can be softened and dissolved by organic solvents, oils, etc., but it will withstand water and water solutions. Oven cured films will not dissolve in most solvents and fluids.

**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).

**Surface Treatments Compatible With Lubricant**

- Aluminum and Magnesium: Anodize coatings
- Carbon Steel: Phosphate coatings
- Stainless Steel: Passivated with acid and dichromate
- Titanium: Phosphate fluoride treatment
Directions for use
1. May be applied by brushing, dipping or spraying directly to clean metal surfaces.
2. Prior surface treatments -- common metal protecting conversion coatings -- can be used to enhance corrosion resistance and wear life.

Loctite Material Specification
LMS dated December 22, 1999. 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
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits. The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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Reference N/A

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