Technical Data Sheet

LOCTITE® LB 8017

Known as LOCTITE® Moly Dry Film Lubricant
October 2014

PRODUCT DESCRIPTION

LOCTITE® LB 8017 provides the following product characteristics:

Technology	Molybdenum-disulfide based
Appearance	Black
Appearance	No flaking when scratched with a blunt object
Components	One component - requires no mixing
Cure	Non-curing
Application	Lubrication and Anti-seize
Specific Benefit	• High temperature • Heavy-duty static loads • Will not attract dirt or dust

LOCTITE® LB 8017 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® LB 8017 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/packaging wear-in, "easy-off" coating for boiler exhaust surface deposits, power transmission couoplings, **Production** - swaging, metal forming, cold extrusion, warm extrusion, cold and warm headings, "dry" lubricant for mechanical linkages, **Aerospace** - gas turbine engine blades, valves, bearings, vacuum and radiation applications, **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

Specific Gravity @ 25 °C	1.3
Density @ 25 °C, g/ml	1.29
Solids/Non-Volatile Content, %	48 to 53
Weight Per Gallon, lbs/gal	10.5 to 11.1
Coverage, 0.018 mm Dry Film	55.7 m² per 4.5 kg

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Any of the following cure schedules will cause LOCTITE® LB 8017 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

Drying Time @ 25 °C, minutes	60

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 x F x 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)	0.06 to 0.12
12.7 mm steel bolts (grade 8) and nuts (grade 5), solvent cleaned, not lubricated	0.27

TYPICAL ENVIRONMENTAL RESISTANCE

Fluid Resistance

An air-dried film of LOCTITE® LB 8017 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 Safety Data Sheet (SDS).

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.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

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 information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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Reference 0.1