

# Information About Molykote® G-4500 Multi-Purpose Synthetic Grease and Molykote® G-4700 Extreme Pressure Synthetic Grease

<b>Type</b> Synthetic lubricants
<b>Physical Form</b> Greases, NLGI #2
<b>Special Features</b> Multi-purpose capabilities; wide temperature operating range; broad compatibility
<b>Primary Use</b> Long-term lubrication for assembly and maintenance

## DESCRIPTION

Molykote® G-4500 Multi-Purpose Synthetic Grease and Molykote® G-4700 Extreme Pressure Synthetic Grease are new specialty lubricants that combine the benefits of wide operating temperatures and broad compatibility with varied materials.

## BENEFITS

Both Molykote G-4500 Multi-Purpose Synthetic Grease and Molykote G-4700 Extreme Pressure Synthetic Grease:

- Are formulated to provide higher load carrying capacity, greater wear resistance and longer service life compared with conventional petroleum-based lubricants
- Are NLGI #2 greases
- Provide good compatibility with most industrial and engineering substrates including many plastic and rubber materials
- Excellent low temperature torque and water washout resistance

Molykote G-4500 Multi-Purpose Synthetic Grease features:

- A unique formulation that includes polyalphaolefin (PAO) base oil, aluminum complex thickener and polytetrafluoroethylene (PTFE) as well as other fortifiers
- Meets FDA Regulation 21 CFR 178.3570 as a lubricant with incidental food contact

Molykote G-4700 Extreme Pressure Synthetic Grease features:

- A unique formulation that includes polyalphaolefin (PAO) base oil, lithium complex thickener, molybdenum disulfide (MoS<sub>2</sub>) and other fortifiers
- Designed to handle extreme loads and applications involving vibration and/or shock loading
- Listed by Cincinnati Machine as an approved lubricant to their P-64 specification

## USES

Both greases can be used with rolling element and plain bearings, pivot pins, cams, guides, ways, drive screws, gears, splines and other machine elements.

Molykote G-4500 Multi-Purpose Synthetic Grease can be used in food-processing applications involving mixers, motors, conveyors, low-temperature equipment, packaging machines and many other applications in or out of the food processing industry where a white grease may be desirable. Such applications may involve furniture, instrumentation, photo and optical equipment.

Molykote G-4700 Extreme Pressure Synthetic Grease can be used in most non-food related grease applications such as metal working machines, motors, fans, blowers, conveyors, wheel bearings and custom machinery where heavy duty, long-lasting lubrication is desired.

## LIMITATIONS

These products are neither tested nor represented as suitable for medical or pharmaceutical uses.

## AUTHORIZATIONS

Molykote G-4500 Multi-Purpose Synthetic Grease complies with FDA Regulation 21 CFR 178.3570 as a lubricant with incidental food contact.

Molykote G-4700 Extreme Pressure Synthetic Grease meets Cincinnati

Table I: Material Compatibility<sup>1</sup>

<u>Elastomers</u>	<u>Compatibility</u>
Butyl .....	Good
Urethane .....	Excellent
Neoprene .....	Excellent
EPDM .....	Fair
SBR .....	Good
Nitrile .....	Excellent
Natural Rubber .....	Poor
Silicone .....	Good
Viton <sup>®2</sup> .....	Excellent
<b><u>Plastics</u></b>	
ABS .....	Excellent
PPO (polypropylene oxide) .....	Excellent
Nylon .....	Excellent
PBT .....	Excellent
PTFE resin .....	Excellent

<sup>1</sup>Compatibility rating for elastomers is based on relative percent change in volume after 70 hours at 70°C (158°F). Compatibility rating for plastics is based on relative percent change in volume after 70 hours at 70°C (158°F).

<sup>2</sup>Viton is a registered trademark of E.I. du Pont de Nemours Company.



## TYPICAL PROPERTIES<sup>1</sup>

These values are not intended for use in preparing specifications.

	<i>Molykote</i> G-4500 Multi-Purpose Synthetic Grease	<i>Molykote</i> G-4700 Extreme Pressure Synthetic Grease
ASTM D 445 Base Oil Viscosity, at 104°F (40°C), cSt .....	110	150
at 212°F (100°C), cSt .....	13.5	20
Thickener Type .....	Aluminum Complex	Lithium Complex
ASTM D 217 Penetration at 77°F (25°C), mm/10 (W/60) .....	265-295	265-295
Specific Gravity at 77°F (25°C) .....	0.84	0.87
ASTM D 2265 Dropping Point, °F (°C), min .....	520 (271)	545 (285)
FTM 321.1 Bleed/Evaporation, 24 hours at 212°F (100°C) .....	3.1/0.4	2.5/0.2
ASTM D 4693 Low Temperature Torque at -40°F (-40°C), Nm .....	0.9	1.1
ASTM D 2266 Four Ball Wear, 40 kg, 1200 rpm, mm .....	0.50	0.32
ASTM D 2596 Four Ball EP, Weld Load, kg, min .....	315	400
ASTM D 2509 Timken OK Load, lb, min .....	40	60
Temperature Range, estimated, °F (°C) .....	-60 to 325 (-51 to 163)	-40 to 350 (-40 to 177)
Dn, bearing ID (mm) × rpm, estimated .....	325,000	350,000

<sup>1</sup>Note: These are preliminary figures based on initial test results.

**Specification Writers: Please obtain copies of the Dow Corning Sales Specifications for these products and use them as a basis for your specifications. They may be obtained from any Dow Corning Sales Office, or from Dow Corning Customer Service in Midland, MI. Call (989) 496-6000.**

Machine P-64, Ford ESA-MIC75-B, GM 998525H and NLGI GC-LB.

### HOW TO USE

Apply using conventional grease application methods, i.e., clean brush, grease gun and manual or automated dispensing equipment.

### SHIPPING LIMITATIONS

None.

### STORAGE AND SHELF LIFE

*Molykote* G-4500 Multi-Purpose Synthetic Grease and *Molykote* G-4700 Extreme Pressure Synthetic Grease have a shelf life of 60 months from date of manufacture.

### PACKAGING

*Molykote* G-4500 Multi-Purpose Synthetic Grease and *Molykote* G-4700 Extreme Pressure Synthetic Grease is available in 3-oz (85-g) tubes, 14.1-oz (400-g) cartridges, 35.3-lb (16-kg) pails and 397-lb (180-kg) drums.

*Molykote* G-4500 Multi-Purpose Synthetic Grease is also available in an 11 oz. aerosol can.

### SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY WRITING TO DOW CORNING CUSTOMER SERVICE, OR BY CALLING (989) 496-6000.

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