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

Type
Synthetic lubricants

Physical Form
Greases, NLGI #2

Special Features
Multi-purpose capabilities; wide temperature operating range; broad compatibility

Primary Use
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 1789.3570 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_2) 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 Cinncinnati

Table I: Material Compatibility[1]

Elastomers	Compatibility
Butyl	Good
Urethane	Excellent
Neoprene	Excellent
EPDM	Fair
SBR	Good
Nitrile	Excellent
Natural Rubber	Poor
Silicone	Good
Viton®[2]	Excellent
Plastics	
ABS	Excellent
PPO (polypropylene oxide)	Excellent
Nylon	Excellent
PBT	Excellent
PTFE resin	Excellent

[1]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).

[2]*Viton* is a registered trademark of E.I. du Pont de Nemours Company.

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TYPICAL PROPERTIES[1]
These values are not intended for use in preparing specifications.

		Molykote G-4500 Multi-Purpose Synthetic Grease	*Molykote* 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

[1]Note: These are preliminary figures based on initial test results.

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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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