MOLYKOTE® HP-300 Grease

Fully fluorinated grease provides extraordinary performance under extreme conditions

Features

- Compatible with most plastics
- Excellent stability at high temperatures
- Superior resistance to chemicals and solvents
- Minimal deterioration due to oxidation; appropriate for long-term lubrication
- Low vapor pressure (base oil)

Composition

- Perfluoropolyether
- Fluorinated polymer

Applications

MOLYKOTE® HP-300 Grease can be used broadly under harsh conditions such as low or high temperatures, corrosive, solvent, liquefied natural gasses, high vacuum, etc. It can be used on cleanroom equipment and semiconductor manufacturing equipment where the volatilization of the lubricating material is undesirable.

How to use

Clean point of application. As is usual with lubricating greases, apply or fill by means of a brush, spatula, or automatic lubrication device.

Handling precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION.

Usable life and storage

When stored, unopened, in a cool, dark place, this product has a usable life of 36 months from the date of production.

Packaging

This product is available in different standard container sizes as shown on **molykote.com**. Detailed container size information should be obtained from your nearest MOLYKOTE® sales office or MOLYKOTE® distributor.

Typical properties

Specification writers: These values are not intended for use in preparing specifications. Please contact your local MOLYKOTE® sales representative prior to writing specifications on this product.

Standard[(1)]	Test	Unit	Result
	Appearance		White
	Density	g/cm^3	2.0
	NLGI class		2
ASTM D1403	Penetration, unworked (1/2 Scale)	mm/10	262
JIS K 2220	Penetration, worked 60	mm/10	276
	Base oil vapor pressure, 20°C	Pa	$2.9x10^{-7}$
AMS8660	Bleed, 30 hours at 204°C (399°F)	%	9.4
AMS8660	Evaporation, 30 hours at 204°C (399°F)	%	0.3
AMS8660	Bleed (200ºC, 24 hours)	%	8.0
AMS8660	Evaporation (200ºC, 24 hours)	%	0.2
AMS8660	Evaporation (200ºC, 1,000 hours)	%	1.0
	Service temperature range	ºC	-65 to 250
ASTM D2596	Four ball weld load (1,500 rpm/1 minute)	N	3300
ASTM D2266	Four ball wear scar (1,200 rpm, 392 N, 1 hour)	mm	1.1
ASTM D471, AMS8660	Volume change rubber SRE-NBR-28/PX	%	-0.1
ASTM D2240	Durometer hardness delta (80 shore A)		+1
AMS8660	Flammability	Pass/Fail	Pass
AMS8660	Corrosive effects (Metals)	No evidence	Pass

[(1)]JIS: Japanese Industrial Standard. AMS: Aerospcae Materials Specifications. ASTM: American Society for Testing and Materials.

Continued on following page.

Typical properties, cont.

Standard[1]	Test	Unit	Result
ASTM D1478	Low temp torque, -65°F (-54ºC)		
	Starting torque	Ncm	582
	Running torque	Ncm	257
JIS K 2220	Low temp torque, -40°F (-40ºC)		
	Starting torque	Ncm	11
	Running torque	Ncm	3.6
JIS K 2220	Low temp torque, 4°F (-20°C)		
	Starting torque	Ncm	4.1
	Running torque	Ncm	1.8
ASM8660	Waterproof seal, 25°C 24 Hours	Pass/fail	Pass
ASTM D149, AMS8660	Dielectric strength, 50 mil	volts/mil	296
ASTM D257, AMS8660	Volume resistivity		
	@ 23°C, 500VDC	ohm-cm	2.83×10^{11}
	@ 177°C, 500VDC	ohm-cm	2.66×10^{11}
ASTM D495, AMS8660	Arc resistance (mean)	Seconds	>420
ASTM D150, AMS8660	Dielectric constant		
	1 kHz		1.99
	1 MHz		2.02
	10 MHz		200

[1]JIS: Japanese Industrial Standard. AMS: Aerospace Materials Specifications. ASTM: American Society for Testing and Materials.

Typical properties, cont.

Standard[1]	Test	Unit	Result
ASTM D150, AMS8660	Dissipation factor		
	1 kHz		0.0004
	1 MHz		0.0006
	10 MHz		0.0004
ASTM D5470 (TIM)	Thermal conductivity @ 30°C	W/mK	0.198
ASTM E2716	Specific heat		
	@ 50°C	J/(g°C)	0.934
	@ 100°C	J/(g°C)	0.969
	@ 150°C	J/(g°C)	0.999

[1] AMS: Aerospace Materials Specifications. ASTM: American Society for Testing and Materials.

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