MOLYKOTE® 55 D-Grease

Silicone-based grease formulated to meet the technical requirements of SAE AMS G-4343

Preliminary data

Features

- Meets the technical requirements of SAE AMS G-4343
- Suitable for applications operating within a service-temperature range of -65°C to +175°C
- Excellent oxidation resistance
- Good corrosion resistance
- Water resistant
- Compatible with many elastomers
- No intentional polytetrafluoroethylene (PTFE) or other per- and polyfluoroalkyl substances (PFAS)
- Meets the applicable limits for cyclic siloxanes D4, D5 and D6 in accordance with Regulation (EU) 2024/1328

Composition

- Silicone oil
- Ester oil
- Lithium soap

Applications

Lubrication of rubber-to-metal interfaces, O-rings and seals in pneumatic systems for aircraft, defense and selected industrial applications. Application-specific compatibility and performance validation are recommended.

Description

MOLYKOTE® 55 D-Grease is a silicone-based grease designed to support lubrication and sealing of rubber O-rings and seals through controlled elastomer interaction. It is formulated to meet the technical requirements of SAE AMS G-4343.

How to use

MOLYKOTE® 55 D-Grease may be applied by brush, grease gun, or suitable automatic lubrication equipment. Suitability for centralized lubrication systems should be confirmed under the specific operating conditions. Do not mix with other greases. MOLYKOTE® 55 D-Grease is known to swell natural rubber according to SAE AMS G-4343. Compatibility testing should be

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
	Color		Beige
Consistency, density, viscosity, dropping point			
DIN 51562	Kinematic base oil viscosity at 25°C	mm^2/s	100
ISO 2137	Worked penetration	mm/10	260 - 300
ISO 2811	Density at 25°C	g/cm^3	0.97
ASTM D2265	Dropping point	°C	≥ 190
Temperature			
	Service temperature range	°C	-65 to +175
ASTM D1478-80	Low temperature torque test at -65°C		
	Initial breakaway torque	Nm	130×10^{-3}
	Torque after 20 min running time	Nm	24×10^{-3}
	Flow pressure (-40°C)	mbar	300
Oil separation			
ASTM D6184	Bleed (100°C / 30h)	%	< 5
ASTM D6184	Evaporation (100°C / 30h)	%	< 2.5
DIN 51817	Oil separation (40°C / 7 days)	%	3
Oxidation resistance			
DIN 51808	Oxidation resistance (100h, 99°C), pressure loss	mbar	≤ 100
DIN 51830-1	RapidOxy 100 oxidation stability, accelerated procedure (160°C)	minutes	700

(1) ASTM: American Society for Testing and Materials. DIN: Deutsche Industrie Norm, ISO: International Standardization Organization.

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performed before use with elastomers, as elastomer behavior may vary depending on material composition, especially the type and the content of plasticizers used. This grease is not recommended for the following materials:

- Silicone rubber (SR)
- Polycarbonate (PC)
- Acrylonitrile-butadiene-styrene (ABS)
- Liquid oxygen (or other strong oxidizers)

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 between 0 and 40°C in the original unopened containers, MOLYKOTE® 55 D-Grease 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 (continued)

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Standard[(1)]	Test	Unit	Result
Coefficient of friction			
	Steel ball against plastic surface (POM) Ø ball = 12.7 mm, load = 6.3 N, v =10 mm/s, 24 hr	μ =	0.02
Water resistance, corrosion protection			
DIN 51807 pt.1	Water resistance, static (90°C, 3h)		0-90
DIN 51802	SKF-EMCOR method Degree of corrosion		0

[(1)] ASTM: American Society for Testing and Materials. DIN: Deutsche Industrie Norm, ISO: International Standardization Organization.

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