

MOLYKOTE® 55 O-Ring (S) Grease

Silicone-based grease for O-rings

Preliminary data

Features

- Excellent oxidation resistance
- Good corrosion resistance
- Wide service-temperature range (-65 to +175°C)
- Compatible with many elastomers
- Water resistant
- No intentional polytetrafluoroethylene (PTFE) or other per- and polyfluoroalkyl substances (PFAS)
- Complies with the limits on cyclic siloxanes (D4, D5 and D6) in accordance with Regulation (EU) 2024/1328

Composition

- Silicone oil
- Ester oil
- Lithium soap

Applications

Lubrication between rubber and metal parts in pneumatic systems in aircraft, automotive and general industrial applications.

Description

MOLYKOTE® 55 O-Ring (S) Grease is a silicone-based material that helps ensure positive lubrication and sealing by slightly swelling rubber O-rings and seals. This product is heat stable and oxidation resistant and is serviceable from approximately -65 to 175°C (-85 to 347°F).

How to use

MOLYKOTE® 55 O-Ring (S) Grease should be applied using brush, grease gun or automatic lubrication system. MOLYKOTE® 55 O-Ring (S) Grease can be used in centralized lubrication systems. Do not mix with other greases.

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	0.98
ASTM D2265	Dropping point	°C	≥ 195
Temperature			
	Service temperature range	°C	-65 to +175
ASTM D1478-80	Low-temperature torque test at -65°C		
	Initial breakaway torque	Nm	115 x 10 ⁻³
	Torque after 20 min running time	Nm	21 x 10 ⁻³
Oil separation			
ASTM D6184	Bleed (150°C/24 h)	%	< 7
ASTM D6184	Evaporation (150°C/24 h)	%	< 1
DIN 51817	Oil separation (40°C/7 days)	%	3
Oxidation resistance			
DIN 51808	Oxidation resistance, (100 h, 99°C), pressure loss		≤ 100 mbar
DIN 51830-1	RapidOxy 100 oxidation stability, accelerated procedure (160°C)	minutes	900

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

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MOLYKOTE® 55 O-Ring (S) Grease has been shown to swell natural rubber. However, compatibility of the lubricant may vary with the plasticizer content of specific materials (especially elastomers). Small-scale compatibility testing should be conducted prior to the use of this product in any application. MOLYKOTE® 55 O-Ring (S) Grease should not be used with the following materials unless thoroughly tested for your specific application:

- 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 O-Ring (S) Grease has a usable life of 60 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	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, 3 h)		0-90
ASTM D1264	Water washout resistance	%	5.2
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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