# 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 | $115 \times 10^{-3}$ |
| | Torque after 20 min running time | Nm | $21 \times 10^{-3}$ |
| **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)

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 | 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.