

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
Date of first issue: 09.10.2014

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : MOLYKOTE(R) 55 O-RING GREASE
Product code : 000000000001889826, 000000000001889826

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-stance/Mixture : Lubricants and lubricant additives

1.3 Details of the supplier of the safety data sheet

Company : Dow Corning Europe S.A.
rue Jules Bordet - Parc Industriel - Zone C
B-7180 Seneffe
Telephone : English Tel: +49 611237507
Deutsch Tel: +49 611237500
Français Tel: +32 64511149
Italiano Tel: +32 64511170
Español Tel: +32 64511163
E-mail address of person responsible for the SDS : sdseu@dowcorning.com

1.4 Emergency telephone number

Dow Corning (Barry U.K. 24h) Tél: +44 1446732350
Dow Corning (Wiesbaden 24h) Tél: +49 61122158
Dow Corning (Seneffe 24h) Tel: +32 64 888240

SECTION 2: Hazards identification


2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : 

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
Date of first issue: 09.10.2014

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
Response:
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:
Dihydro-3-(tetrapropenyl)furan-2,5-dione

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Silicone grease

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Dihydro-3-(tetrapropenyl)furan-2,5-dione	26544-38-7 247-781-6	Eye Irrit. 2; H319 Skin Sens. 1A; H317 Aquatic Chronic 4; H413	>= 0.25 - < 1

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

MOLYKOTE(R) 55 O-RING GREASE

Version	Revision Date:	SDS Number:	Date of last issue: 13.11.2015
1.6	12.02.2016	623277-00007	Date of first issue: 09.10.2014

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Silicon oxides
Formaldehyde
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.

MOLYKOTE(R) 55 O-RING GREASE

Version	Revision Date:	SDS Number:	Date of last issue: 13.11.2015
1.6	12.02.2016	623277-00007	Date of first issue: 09.10.2014

6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
Date of first issue: 09.10.2014

7.3 Specific end use(s)

Specific use(s) : These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value	
Lithium stearate	Workers	Inhalation	Long-term systemic effects	3 mg/m ³	
	Workers	Inhalation	Acute systemic effects	6 mg/m ³	
	Workers	Skin contact	Long-term systemic effects	41 mg/kg bw/day	
	Workers	Skin contact	Acute systemic effects	41 mg/kg bw/day	
	Workers	Skin contact	Long-term local effects	0.172 mg/cm ²	
	Consumers	Skin contact	Long-term systemic effects	41 mg/kg bw/day	
	Consumers	Skin contact	Acute systemic effects	41 mg/kg bw/day	
	Consumers	Skin contact	Long-term local effects	0.086 mg/cm ²	
	Consumers	Ingestion	Long-term systemic effects	41 mg/kg bw/day	
	Consumers	Ingestion	Acute systemic effects	41 mg/kg bw/day	
	Dihydro-3-(tetrapropenyl)furan-2,5-dione	Workers	Skin contact	Long-term systemic effects	0.33 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Lithium stearate	Fresh water	0.1 mg/l
	Marine water	0.01 mg/l
	Intermittent use/release	1 mg/l

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
 Date of first issue: 09.10.2014

Di(2-ethylhexyl) sebacate	Soil	0.865 mg/kg
Dihydro-3-(tetrapropenyl)furan-2,5-dione	Fresh water	0.008 mg/l
	Marine water	0.0008 mg/l
	Intermittent use/release	0.08 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	7 mg/kg
	Marine sediment	0.07 mg/kg
	Soil	0.08 mg/kg

8.2 Exposure controls

Engineering measures

Processing may form hazardous compounds (see section 10).
 Ensure adequate ventilation, especially in confined areas.
 Minimize workplace exposure concentrations.

Personal protective equipment

- Eye protection : Wear the following personal protective equipment:
Safety glasses

- Hand protection : Impervious gloves
 - Material
 - Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

- Filter type : Particulates type (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Grease

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6	Revision Date: 12.02.2016	SDS Number: 623277-00007	Date of last issue: 13.11.2015 Date of first issue: 09.10.2014
----------------	------------------------------	-----------------------------	---

Colour	: white
Odour	: slight
Odour Threshold	: No data available
pH	: Not applicable
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: Not applicable
Flash point	: > 101.1 °C Method: closed cup
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Not classified as a flammability hazard
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: Not applicable
Relative vapour density	: No data available
Relative density	: 1.1
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight	: No data available
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SECTION 10: Stability and reactivity

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
Date of first issue: 09.10.2014

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Use at elevated temperatures may form highly hazardous compounds.
Can react with strong oxidizing agents.
Hazardous decomposition products will be formed at elevated temperatures.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

Thermal decomposition : Benzene
Formaldehyde

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Acute oral toxicity : LD50 (Rat): 2,900 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 5.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Skin corrosion/irritation

Not classified based on available information.

Product:

Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
Date of first issue: 09.10.2014

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: Not classified based on available information.

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Result: positive
Remarks: Based on data from similar materials

Assessment: Probability or evidence of high skin sensitisation rate in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on foetal develop- : Test Type: Reproduction/Developmental toxicity screening

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6	Revision Date: 12.02.2016	SDS Number: 623277-00007	Date of last issue: 13.11.2015 Date of first issue: 09.10.2014
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ment
test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Species: Rat
NOAEL: 50 mg/kg
LOAEL: 150 mg/kg
Application Route: Ingestion
Exposure time: 54 Days
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC0 (Daphnia magna (Water flea)): 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 110 mg/l
Exposure time: 96 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 33 mg/l
Exposure time: 96 h

Toxicity to bacteria : EC50 : 800 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

MOLYKOTE(R) 55 O-RING GREASE

Version 1.6 Revision Date: 12.02.2016 SDS Number: 623277-00007 Date of last issue: 13.11.2015
Date of first issue: 09.10.2014

12.2 Persistence and degradability

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 9.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

Components:

Dihydro-3-(tetrapropenyl)furan-2,5-dione:

Partition coefficient: n-octanol/water : log Pow: > 4.39

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

MOLYKOTE(R) 55 O-RING GREASE

Version	Revision Date:	SDS Number:	Date of last issue: 13.11.2015
1.6	12.02.2016	623277-00007	Date of first issue: 09.10.2014

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Other regulations : Take note of Dir 94/33/EC on the protection of young people at work.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

NZIoC : All ingredients listed or exempt.

REACH : All ingredients (pre-)registered or exempt.

TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

PICCS : All ingredients listed or exempt.

KECI : All ingredients listed, exempt or notified.

ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from inventory listing.

IECSC : All ingredients listed or exempt.

AICS : All ingredients listed or exempt.

MOLYKOTE(R) 55 O-RING GREASE

Version	Revision Date:	SDS Number:	Date of last issue: 13.11.2015
1.6	12.02.2016	623277-00007	Date of first issue: 09.10.2014

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

TCSI : All ingredients listed or exempt.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Full text of H-Statements

H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H413 : May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

Aquatic Chronic : Chronic aquatic toxicity
Eye Irrit. : Eye irritation
Skin Sens. : Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

MOLYKOTE(R) 55 O-RING GREASE

Version	Revision Date:	SDS Number:	Date of last issue: 13.11.2015
1.6	12.02.2016	623277-00007	Date of first issue: 09.10.2014

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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