

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

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**SECTION 1. IDENTIFICATION**

Product name : MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING

Product code : 000000000004092585

**Manufacturer or supplier's details**

Company name of supplier : Dow Corning Corporation

Address : South Saginaw Road  
Midland Michigan 48686

Telephone : (989) 496-6000

Emergency telephone : 24 Hour Emergency Telephone : (989) 496-5900  
CHEMTREC : (800) 424-9300

**Recommended use of the chemical and restrictions on use**

Recommended use : Lubricants and lubricant additives

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Flammable liquids : Category 2

Eye irritation : Category 2A

Carcinogenicity (Inhalation) : Category 2

Specific target organ systemic toxicity - single exposure : Category 3

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer if inhaled.

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version 4.0	Revision Date: 02/11/2016	SDS Number: 693070-00006	Date of last issue: 10/15/2015 Date of first issue: 10/31/2014
----------------	------------------------------	-----------------------------	---

and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces.  
No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Repeated exposure may cause skin dryness or cracking.

Vapors may form explosive mixture with air.

Static-accumulating flammable liquid.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture	: Mixture
Chemical nature	: Inorganic and organic compounds Mixture

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Propan-2-ol	67-63-0	>= 30 - < 50
n-Butyl acetate	123-86-4	>= 20 - < 30
Antimony trioxide	1309-64-4	>= 10 - < 20
Molybdenum sulfide	1317-33-5	>= 10 - < 20

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

---

**SECTION 4. FIRST AID MEASURES**

- |   |   |   |
|---|---|---|
| General advice  | : | In the case of accident or if you feel unwell, seek medical advice immediately.<br>When symptoms persist or in all cases of doubt seek medical advice.                              |
| If inhaled  | : | If inhaled, remove to fresh air.<br>Get medical attention.  |
| In case of skin contact                                     | : | In case of contact, immediately flush skin with plenty of water.<br>Get medical attention if symptoms occur.  |
| In case of eye contact                                      | : | In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.<br>If easy to do, remove contact lens, if worn.<br>Get medical attention.                  |
| If swallowed  | : | If swallowed, DO NOT induce vomiting.<br>Get medical attention if symptoms occur.<br>Rinse mouth thoroughly with water.   |
| Most important symptoms and effects, both acute and delayed | : | Causes serious eye irritation.<br>May cause drowsiness or dizziness.<br>Suspected of causing cancer if inhaled.<br>Prolonged or repeated contact may dry skin and cause irritation. |
| 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.                         |
| Notes to physician  | : | Treat symptomatically and supportively.   |
- 

**SECTION 5. FIRE-FIGHTING MEASURES**

- |                                       |   |   |
|---------------------------------------|---|---|
| Suitable extinguishing media          | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical  |
| Unsuitable extinguishing media        | : | High volume water jet   |
| Specific hazards during fire fighting | : | Do not use a solid water stream as it may scatter and spread fire.<br>Flash back possible over considerable distance.<br>Vapors may form explosive mixtures with air.<br>Exposure to combustion products may be a hazard to health. |

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version 4.0	Revision Date: 02/11/2016	SDS Number: 693070-00006	Date of last issue: 10/15/2015 Date of first issue: 10/31/2014
----------------	------------------------------	-----------------------------	---

Hazardous combustion products	: Carbon oxides Metal oxides Sulfur oxides
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.
Special protective equipment for fire-fighters	: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	: Remove all sources of ignition. Ventilate the area. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked 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.

**SECTION 7. HANDLING AND STORAGE**

Technical measures	: Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent
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**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version 4.0	Revision Date: 02/11/2016	SDS Number: 693070-00006	Date of last issue: 10/15/2015 Date of first issue: 10/31/2014
----------------	------------------------------	-----------------------------	---

physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations.  
Restrict flow velocity in order to reduce the accumulation of static electricity.

- Local/Total ventilation : Use with local exhaust ventilation.  
Use only in an area equipped with explosion proof exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
Do not breathe vapors or spray mist.  
Do not swallow.  
Do not get in eyes.  
Handle in accordance with good industrial hygiene and safety practice.  
Non-sparking tools should be used.  
Keep container tightly closed.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.  
Store locked up.  
Keep tightly closed.  
Keep in a cool, well-ventilated place.  
Store in accordance with the particular national regulations.  
Keep away from heat and sources of ignition.
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents  
Organic peroxides  
Flammable solids  
Pyrophoric liquids  
Pyrophoric solids  
Self-heating substances and mixtures  
Substances and mixtures which in contact with water emit flammable gases  
Explosives  
Gases

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propan-2-ol	67-63-0	TWA	200 ppm	ACGIH

# MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING

Version 4.0      Revision Date: 02/11/2016      SDS Number: 693070-00006      Date of last issue: 10/15/2015  
 Date of first issue: 10/31/2014

		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m <sup>3</sup>	NIOSH REL
		ST	500 ppm 1,225 mg/m <sup>3</sup>	NIOSH REL
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA Z-1
n-Butyl acetate	123-86-4	TWA	150 ppm	ACGIH
		STEL	200 ppm	ACGIH
		TWA	150 ppm 710 mg/m <sup>3</sup>	OSHA Z-1
		TWA	150 ppm 710 mg/m <sup>3</sup>	NIOSH REL
		ST	200 ppm 950 mg/m <sup>3</sup>	NIOSH REL
Antimony trioxide	1309-64-4	TWA	0.5 mg/m <sup>3</sup> (antimony)	OSHA Z-1
		TWA	0.5 mg/m <sup>3</sup> (antimony)	NIOSH REL
Molybdenum sulfide	1317-33-5	TWA (total dust)	15 mg/m <sup>3</sup> (Molybdenum)	OSHA Z-1
		TWA (Inhalable fraction)	10 mg/m <sup>3</sup> (Molybdenum)	ACGIH
		TWA (Respirable fraction)	3 mg/m <sup>3</sup> (Molybdenum)	ACGIH

### Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

**Engineering measures** : Minimize workplace exposure concentrations.  
 Use only in an area equipped with explosion proof exhaust ventilation.  
 Use with local exhaust ventilation.  
 Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m<sup>3</sup> - total dust, 5 mg/m<sup>3</sup> - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m<sup>3</sup> - respirable particles, 10 mg/m<sup>3</sup> - inhalable particles.

### Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version 4.0	Revision Date: 02/11/2016	SDS Number: 693070-00006	Date of last issue: 10/15/2015 Date of first issue: 10/31/2014
----------------	------------------------------	-----------------------------	---

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

- Hand protection
- Material : Antistatic gloves
- Material : Impervious gloves
- Material : Flame retardant gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration 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.
- Eye protection : Wear the following personal protective equipment:  
Safety goggles
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Wear the following personal protective equipment:  
Flame retardant antistatic protective clothing.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- 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.  
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.  
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry ([www.SEHSC.com](http://www.SEHSC.com)) or contact the Dow Corning customer service group.

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION  
COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Color	: gray
Odor	: solvent
Odor Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 82 °C
Flash point	: 15 °C Method: closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: 1.06
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, kinematic	: 15 mm <sup>2</sup> /s
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.



**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

Molecular weight : No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Highly flammable liquid and vapor.  
Vapors may form explosive mixture with air.  
Can react with strong oxidizing agents.

Conditions to avoid : Handling operations that can promote accumulation of static charges.  
Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute inhalation toxicity : Acute toxicity estimate: 88.33 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: Calculation method

**Ingredients:****Propan-2-ol:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 72.6 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

**n-Butyl acetate:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 21.1 mg/l

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue:
4.0	02/11/2016	693070-00006	10/15/2015
			Date of first issue: 10/31/2014

---

Exposure time: 4 h  
Test atmosphere: vapor  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: OECD Test Guideline 402

**Antimony trioxide:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

**Molybdenum sulfide:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 401  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 2.82 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

Not classified based on available information.

**Ingredients:****Propan-2-ol:**

Species: Rabbit  
Result: No skin irritation

**n-Butyl acetate:**

Assessment: Repeated exposure may cause skin dryness or cracking.

**Antimony trioxide:**

Species: Rabbit  
Result: No skin irritation

**Molybdenum sulfide:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION  
COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

---

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Ingredients:****Propan-2-ol:**

Species: Rabbit

Result: Irritation to eyes, reversing within 21 days

**n-Butyl acetate:**

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

**Antimony trioxide:**

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

**Molybdenum sulfide:**

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

**Respiratory or skin sensitization**

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

**Ingredients:****Propan-2-ol:**

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

**n-Butyl acetate:**

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

**Antimony trioxide:**

Test Type: Maximization Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

**Molybdenum sulfide:**

Test Type: Maximization Test

Routes of exposure: Skin contact

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION  
COATING**

Version 4.0      Revision Date: 02/11/2016      SDS Number: 693070-00006      Date of last issue: 10/15/2015  
Date of first issue: 10/31/2014

---

Species: Guinea pig  
Result: negative

**Germ cell mutagenicity**

Not classified based on available information.

**Ingredients:****Propan-2-ol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

**n-Butyl acetate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

: Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

**Antimony trioxide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

**Molybdenum sulfide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

**Carcinogenicity**

Suspected of causing cancer if inhaled.

**Ingredients:****Propan-2-ol:**

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

---

Species: Rat  
 Application Route: inhalation (vapor)  
 Exposure time: 104 weeks  
 Method: OECD Test Guideline 451  
 Result: negative

**Antimony trioxide:**

Species: Rat  
 Application Route: inhalation (dust/mist/fume)  
 Exposure time: 12 Months  
 Result: positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with animals.

**Molybdenum sulfide:**

Species: Rat  
 Application Route: Ingestion  
 Exposure time: 232 days  
 Result: negative

**IARC**

Group 2B: Possibly carcinogenic to humans

Antimony trioxide 1309-64-4

**OSHA**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**Ingredients:****Propan-2-ol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

**n-Butyl acetate:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: inhalation (vapor)  
 Method: OECD Test Guideline 416

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION  
COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

---

Result: negative

**Antimony trioxide:**

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: inhalation (dust/mist/fume)  
Method: OECD Test Guideline 414  
Result: negative

**STOT-single exposure**

May cause drowsiness or dizziness.

**Ingredients:****Propan-2-ol:**

Assessment: May cause drowsiness or dizziness.

**n-Butyl acetate:**

Assessment: May cause drowsiness or dizziness.

**STOT-repeated exposure**

Not classified based on available information.

**Ingredients:****Antimony trioxide:**

Routes of exposure: inhalation (dust/mist/fume)  
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

**Repeated dose toxicity****Ingredients:****Propan-2-ol:**

Species: Rat  
NOAEL: 5000 ppm  
Application Route: inhalation (vapor)  
Exposure time: 104 Weeks  
Method: OECD Test Guideline 413

**n-Butyl acetate:**

Species: Rat  
NOAEL: 2.4 mg/l  
Application Route: inhalation (vapor)  
Exposure time: 90 Days

**Antimony trioxide:**

Species: Rat  
NOAEL: 1,686 mg/kg  
Application Route: Ingestion  
Exposure time: 90 Days  
Method: OECD Test Guideline 408

Species: Rat

# MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

NOAEL:  $\geq 0.51$  mg/m<sup>3</sup>  
 Application Route: inhalation (dust/mist/fume)  
 Exposure time: 1 yr

### Aspiration toxicity

Not classified based on available information.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Ingredients:

##### **Propan-2-ol:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 10,000 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
 Exposure time: 24 h

Toxicity to bacteria : EC50 (Pseudomonas putida): > 1,050 mg/l  
 Exposure time: 16 h

##### **n-Butyl acetate:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 18 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 44 mg/l  
 Exposure time: 48 h

Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): 674.7 mg/l  
 Exposure time: 72 h

NOEC (Desmodesmus subspicatus (green algae)): 200 mg/l  
 Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 23 mg/l  
 Exposure time: 21 d  
 Method: OECD Test Guideline 211

Toxicity to bacteria : IC50 (Protozoa): 356 mg/l  
 Exposure time: 40 h

##### **Antimony trioxide:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 14.4 mg/l  
 Exposure time: 96 h  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 12.1 mg/l  
 Exposure time: 48 h  
 Remarks: Based on data from similar materials

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 36.6

# MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING

Version 4.0	Revision Date: 02/11/2016	SDS Number: 693070-00006	Date of last issue: 10/15/2015 Date of first issue: 10/31/2014
----------------	------------------------------	-----------------------------	---

- mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials
- NOEC (Pseudokirchneriella subcapitata (green algae)): 2.11 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 4.5 mg/l  
Exposure time: 28 d  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.74 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials
- Molybdenum sulfide:**
- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 644.2 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 130.9 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)): 289.2 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): > 17 mg/l  
Exposure time: 12 Months  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 156.5 mg/l  
Exposure time: 21 d  
Remarks: Based on data from similar materials
- Toxicity to bacteria : NOEC: > 950 mg/l  
Exposure time: 17 d  
Remarks: Based on data from similar materials

## Persistence and degradability

### Ingredients:

#### **Propan-2-ol:**

- Biodegradability : Result: rapidly degradable



**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

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**n-Butyl acetate:**  
Biodegradability : Result: Readily biodegradable.  
Biodegradation: 96 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

**Bioaccumulative potential****Ingredients:**

**Propan-2-ol:**  
Partition coefficient: n-octanol/water : log Pow: 0.05

**n-Butyl acetate:**  
Partition coefficient: n-octanol/water : log Pow: 2.3

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Resource Conservation and Recovery Act (RCRA) : When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste.

Waste Code : D001: Ignitability  
D004  
D008

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not burn, or use a cutting torch on, the empty drum.  
If not otherwise specified: Dispose of as unused product.

**SECTION 14. TRANSPORT INFORMATION****International Regulation****UNRTDG**

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Propan-2-ol, n-Butyl acetate)

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

Class	: 3
Packing group	: II
Labels	: 3
<b>IATA-DGR</b>	
UN/ID No.	: UN 1993
Proper shipping name	: Flammable liquid, n.o.s. (Propan-2-ol, n-Butyl acetate)
Class	: 3
Packing group	: II
Labels	: Flammable Liquids
Packing instruction (cargo aircraft)	: 364
Packing instruction (passenger aircraft)	: 353
<b>IMDG-Code</b>	
UN number	: UN 1993
Proper shipping name	: FLAMMABLE LIQUID, N.O.S. (Propan-2-ol, n-Butyl acetate)
Class	: 3
Packing group	: II
Labels	: 3
EmS Code	: F-E, S-E
Marine pollutant	: no

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable for product as supplied.

**Domestic regulation**

<b>49 CFR</b>	
UN/ID/NA number	: UN 1993
Proper shipping name	: FLAMMABLE LIQUIDS, N.O.S. (Propan-2-ol, n-Butyl acetate)
Class	: 3
Packing group	: II
Labels	: FLAMMABLE LIQUID
ERG Code	: 128
Marine pollutant	: no

**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Antimony trioxide	1309-64-4	1000	8333
Arsenic oxide	1327-53-3	1	10526
n-Butyl acetate	123-86-4	5000	20833

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**

Version 4.0      Revision Date: 02/11/2016      SDS Number: 693070-00006      Date of last issue: 10/15/2015  
 Date of first issue: 10/31/2014

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Arsenic oxide	1327-53-3	1	10526

**SARA 311/312 Hazards** : Fire Hazard  
 Acute Health Hazard  
 Chronic Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

Propan-2-ol	67-63-0	44 %
Antimony trioxide	1309-64-4	12 %

**US State Regulations****Pennsylvania Right To Know**

Propan-2-ol	67-63-0	30 - 50 %
n-Butyl acetate	123-86-4	20 - 30 %
Antimony trioxide	1309-64-4	10 - 20 %
Molybdenum sulfide	1317-33-5	10 - 20 %
Polyvinyl acetate polyvinyl alcohol butyral	68648-78-2	5 - 10 %
Cumene	98-82-8	0 - 0.1 %

**New Jersey Right To Know**

Propan-2-ol	67-63-0	30 - 50 %
n-Butyl acetate	123-86-4	20 - 30 %
Antimony trioxide	1309-64-4	10 - 20 %
Molybdenum sulfide	1317-33-5	10 - 20 %
Polyvinyl acetate polyvinyl alcohol butyral	68648-78-2	5 - 10 %

**California Prop. 65**

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Arsenic oxide	1327-53-3
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WARNING! This product contains a chemical known in the State of California to cause cancer.

Antimony trioxide	1309-64-4
Cumene	98-82-8
Lead oxide	1317-36-8
Arsenic oxide	1327-53-3

**The ingredients of this product are reported in the following inventories:**

NZIoC : All ingredients listed or exempt.

ENCs/ISHL : All components are listed on ENCS/ISHL or exempted from

# MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING

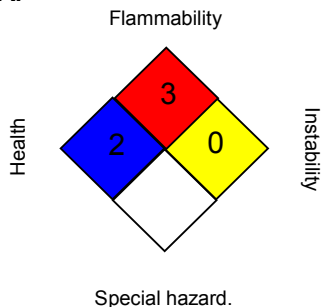
Version 4.0      Revision Date: 02/11/2016      SDS Number: 693070-00006      Date of last issue: 10/15/2015  
 Date of first issue: 10/31/2014

	inventory listing.
IECSC	: All ingredients listed or exempt.
AICS	: All ingredients listed or exempt.
REACH	: For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.
TSCA	: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
PICCS	: Consult your local Dow Corning office.
KECI	: One or more ingredients are not listed or exempt.
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.

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA:



#### HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

### Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

## MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	: 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet	: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
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Revision Date	: 02/11/2016
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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 guid-

**MOLYKOTE(R) 3402-C LF ANTI-FRICTION  
COATING**

Version	Revision Date:	SDS Number:	Date of last issue: 10/15/2015
4.0	02/11/2016	693070-00006	Date of first issue: 10/31/2014

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ance 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.

US / Z8