

PRODUCT SAFETY DATA SHEET

According to article 31 and Annex II of the EU REACH Regulation

Version: 1.0

Revision Date: 28.04.2009

MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY**

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

Company : Dow Corning Europe S.A.
rue Jules Bordet - Parc Industriel - Zone C
B-7180 Seneffe
Belgium

Service : Dow Corning Central Europe Tel: +49 6112371
Fax: +49 611237609
Dow Corning Northern Europe Tel: +44 1676528000
Fax: +44 1676528001
Dow Corning Southern Europe Tel: +33 472841360
Fax: +33 472841379

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

E-mail address (Safety Data Sheet) : sdseu@dowcorning.com

Use of the substance/preparation : Lubricants and additives

2. HAZARDS IDENTIFICATION**The principal hazards of the product as supplied are:**

Highly flammable.
Irritating to eyes.
Limited evidence of a carcinogenic effect.
Repeated exposure may cause skin dryness or cracking.
Vapours may cause drowsiness and dizziness.

Vapours may form explosive mixtures with air.

3. COMPOSITION / INFORMATION ON INGREDIENTS**Chemical characterization:** Mixture of inorganic and organic compounds**Hazardous Ingredients:**

| Name | CAS-No. | EINECS/ ELINCS No. | Conc. (% w/w) | Classification |
|-----------------|----------|-----------------------|---------------|------------------------------|
| Propan-2-ol | 67-63-0 | 200-661-7 | 44.0 | Xi F R36 R11 R67 |
| n-Butyl acetate | 123-86-4 | 204-658-1 | 24.0 | R66 R10 R67 |

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| | | | | |
|--|------------|-------------------------|------|----------------------|
| Antimony trioxide | 1309-64-4 | 215-175-0 | 12.0 | Xn, Carc. Cat. 3 R40 |
| Molybdenum sulfide | 1317-33-5 | 215-263-9 | 12.0 | |
| Polyvinyl acetate polyvinyl alcohol butyral | 68648-78-2 | Exempt or not available | 5.8 | |
| 2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene | 26762-29-8 | Exempt or not available | 1.9 | |

4. FIRST AID MEASURES

| | | |
|-----------------------------|---|---|
| On contact with eyes | : | Immediately flush with water. If eye irritation persists, consult a specialist. |
| On skin contact | : | Flush with water. |
| If inhaled | : | Remove to fresh air. Obtain medical attention. |
| On ingestion | : | Do not induce vomiting. Obtain medical attention. |

5. FIRE-FIGHTING MEASURES

| | | |
|--|---|---|
| Suitable extinguishing media | : | On large fires use dry chemical, foam or water spray (fog). On small fires use carbon dioxide (CO ₂), dry chemical or water spray. Water can be used to cool fire exposed containers. |
| Unsuitable extinguishing media | : | None known. |
| Hazards during fire fighting | : | Vapours are heavier than air and can travel along ground to remote ignition sources. Electrostatic charges may be generated during transfer of product from its container. Ensure that all equipment is electrically earthed. Vapours may form explosive mixtures with air. |
| Special protective equipment/procedures | : | A self-contained respirator and protective clothing should be worn. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool. |
| Hazardous Combustion Products | : | Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde. Metal products. Sulphur products. Nitrogen products. |

6. ACCIDENTAL RELEASE MEASURES

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| | | |
|----------------------------------|---|---|
| Personal precautions | : | Wear proper protective equipment. |
| Environmental precautions | : | Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers. |
| Methods for cleaning up | : | Determine the need to evacuate or isolate the area according to your local emergency plan. Eliminate all possible sources of ignition. Very large spills should be contained by bunding, etc... procedures. Mop, wipe or soak up with absorbent material and place in a container with a lid. The spilled product produces an extremely slippery surface. |

7. HANDLING AND STORAGE

| | | |
|---------------------------------------|---|---|
| Advice on safe handling | : | General ventilation is required. Local ventilation is recommended. Avoid skin and eye contact. Do not breathe vapour. Do not breathe spray or mist. |
| Advice on storage | : | Store in a flameproof, well ventilated area. Electrostatic charges may be generated during transfer of product from its container. Ensure that all equipment is electrically earthed. Keep container tightly closed. Vapours may form explosive mixtures with air. |
| Specific uses | : | Refer to technical data sheet available on request. |
| Unsuitable packaging materials | : | None known. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls : Ventilation : Refer to Section 7

Exposure controls for hazardous components

| Name | CAS-No. | Exposure Limits |
|--------------------|-----------|---|
| Propan-2-ol | 67-63-0 | 400 ppm TWA 500 ppm STEL 999 mg/m3 TWA 1,250 mg/m3 STEL |
| n-Butyl acetate | 123-86-4 | 200 ppm STEL 150 ppm TWA 966 mg/m3 STEL 724 mg/m3 TWA |
| Antimony trioxide | 1309-64-4 | 0.5 mg/m3 TWA as Sb |
| Molybdenum sulfide | 1317-33-5 | 20 mg/m3 STEL as Mo, insoluble compounds 10 mg/m3 STEL as Mo, soluble compounds 10 mg/m3 TWA as Mo, insoluble compounds 5 mg/m3 TWA as Mo, soluble compounds |

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Polyvinyl acetate polyvinyl alcohol butyral 68648-78-2 4 mg/m3 TWA Respirable dust
10 mg/m3 TWA Inhalable dust

2,5-Furandione, telomer with ethenylbenzene and (1-methylethyl)benzene 26762-29-8 4 mg/m3 TWA Respirable dust
10 mg/m3 TWA Inhalable dust

Personal protection equipment

- Respiratory protection** : Suitable respiratory protection should be worn if the product is used in large quantities, confined spaces or in other circumstances where the OEL may be approached or exceeded.
A suitable respirator must be worn if the product is used in any circumstances where an aerosol or mist may be generated, such as during spraying or similar activities.
Depending on the working conditions, wear a respiratory mask with filter(s) ABP or use a self-contained respirator.
The choice of a filter type depends on the amount and type of chemical being handled in the workplace. Regarding filter characteristics, contact your respiratory protection supplier.
- Hand protection** : Chemical protective gloves should be worn: Polyvinyl alcohol(PVA). Nitrile rubber. Silver shield(TM). 4H(TM). Viton(TM). Regarding glove's breakthrough time, contact your chemical protective glove supplier.
- Eye protection** : Face shield or safety goggles.
- Skin protection** : Wear impervious overalls in circumstances where significant skin contact can occur.
- Hygiene measures** : Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.
- Environmental exposure controls** : Refer to section 6 and 12.
- Additional information** : These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form: Liquid **Colour:** Gray **Odour:** Solvent odor.

Important health, safety and environmental information

Boiling point/range : 82 °C

Flash point : 15 °C (Tag Closed Cup)

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| | | |
|-----------------------------|---|---|
| Explosive properties | : | No Vapours may form explosive mixtures with air. |
| Specific Gravity | : | 1.06 |
| Viscosity | : | 32 s at 25°C. |
| Oxidizing properties | : | No |

The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

10. STABILITY AND REACTIVITY

| | | |
|---|---|--|
| Stability | : | Stable under normal usage conditions. |
| Conditions to avoid | : | None established. |
| Materials to avoid | : | Can react with strong oxidising agents. |
| Hazardous decomposition products | : | Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica. Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde. Metal products. Sulphur products. Nitrogen products. |

11. TOXICOLOGICAL INFORMATION

| | | |
|--|---|---|
| On contact with eyes | : | Irritating. |
| On skin contact | : | Repeated or prolonged contact may cause defatting of the skin, leading to dermatitis. |
| If inhaled | : | Limited evidence of carcinogenic effect. May cause dizziness, drowsiness, confusion, headaches, nausea, and at high concentrations, unconsciousness. |
| On ingestion | : | Small amounts transferred to the mouth by fingers during use should not injure. Swallowing large amounts may cause digestive discomfort. |
| Other Health Hazard Information | : | This product contains (a) powder(s) hazardous by inhalation. This is not relevant to the current physical form of the product, which is not in a respirable form. Product may emit formaldehyde vapour at temperatures above 150°C in the presence of air. Formaldehyde vapour is a suspected carcinogen, toxic by inhalation and irritating to eyes and the respiratory system. Exposure limits should be strictly respected. |

¹ Based on product test data.

² Based on test data from similar products.

12. ECOLOGICAL INFORMATION

Environmental fate and distribution

The organic solvents in the product are biodegradable. Organic solvents may evaporate into the atmosphere, where they degrade.

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Ecotoxicity effects

No adverse effects on aquatic organisms are predicted.

Bioaccumulation : No bioaccumulation potential.

Fate and effects in waste water treatment plants

No adverse effects on bacteria are predicted.

13. DISPOSAL CONSIDERATIONS

Product disposal : 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.

Packaging disposal : Dispose of in accordance with local regulations. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

14. TRANSPORT INFORMATION**Road / Rail (ADR/RID)**

UN No. : UN 1993

Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.(Isopropanol / Butyl Acetate)

Class : 3

Packing group : II

Labels : 3

Sea transport (IMDG)

UN No. : UN 1993

Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.(Isopropanol / Butyl Acetate)

Class : 3

Packing group : II

Emergency Schedule (EmS) : F-E
S-E

Labels : flammable liquid

Air transport (IATA)

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UN No. : UN 1993

Proper Shipping Name : Flammable liquid, n.o.s.(Isopropanol / Butyl Acetate)

Class : 3

Packing group : II

Labels : Flammable Liquid

15. REGULATORY INFORMATION**Labelling according to EEC Directive**

Contains : Antimony trioxide

Symbols : F Highly flammable.
Xn Harmful.

R-phrases : R11 Highly flammable.
R36 Irritating to eyes.
R40 Limited evidence of a carcinogenic effect.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

S-phrases : S23(S) Do not breathe spray.
S23(V) Do not breathe vapour.
S24 Avoid contact with skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33 Take precautionary measures against static discharges.
S51 Use only in well-ventilated areas.

National legislation / regulations

Ozone depleting chemicals : No ozone depleting chemicals are present or used in manufacture.

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Status

| | |
|---------------|---|
| EINECS | : All ingredients listed, exempt or notified (ELINCS). |
| IECSC | : All ingredients listed or exempt. |
| DSL | : All ingredients listed or exempt. |
| TSCA | : For R&D purposes only. One or more of the components of this product may not be listed on the TSCA inventory of chemical substances. Product should be used solely for scientific experimentation, research or analysis under the supervision of technically qualified individuals. |
| AICS | : One or more ingredients are not listed or exempt. |
| KECL | : One or more ingredients are not listed or exempt or identified. |
| PICCS | : One or more ingredients are not listed or exempt. |

16. OTHER INFORMATION

This product safety data sheet was prepared in compliance with article 31 and Annex II of the EU REACH Regulation as well as its relevant amendments, on the approximation of laws, regulations and administrative provisions relative to the classification, packaging and labelling of dangerous substances and preparations.

It is the responsibility of persons in receipt of this Product Safety Data Sheet to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces a formulation containing the Dow Corning product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from the Dow Corning Product Safety Data Sheet to their own Product Safety Data Sheet in compliance with article 31 and Annex II of the EU REACH Regulation.

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS. Dow Corning shall not be held responsible for any defect in the product covered by this SDS, should the existence of such defect not be detectable considering the current state of scientific and technical knowledge.

As stated above, this Safety Data Sheet has been prepared in compliance with applicable European law. If you purchase this material outside Europe, where compliance laws may differ, you should receive from your local Dow Corning supplier a SDS applicable to the country in which the product is sold and intended to be used. Please note that the appearance and content of the SDS may vary - even for the same product - between different countries, reflecting the different compliance requirements. Should you have any question, please refer to your local Dow Corning supplier.

R10 Flammable., **R11** Highly flammable., **R36** Irritating to eyes., **R40** Limited evidence of a carcinogenic effect., **R66** Repeated exposure may cause skin dryness or cracking., **R67** Vapours may cause drowsiness and dizziness.