

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

Version 3.3 Revision Date: 11.02.2016 SDS Number: 693005-00006 Date of last issue: 15.10.2015
Date of first issue: 31.10.2014

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

1.1 Product identifier

Trade name : MOLYKOTE(R) 3402-C LF ANTI-FRICTION COATING
Product code : 000000000004092585, 000000000004092585

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

Use of the Substance/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)


Flammable liquids, Category 2 H225: Highly flammable liquid and vapour.
Eye irritation, Category 2 H319: Causes serious eye irritation.
Carcinogenicity, Category 2 H351: Suspected of causing cancer if inhaled.
Specific target organ toxicity - single exposure, Category 3 H336: May cause drowsiness or dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer if inhaled.
Supplemental Hazard Statements	:	EUH066 Repeated exposure may cause skin dryness or cracking.
Precautionary statements	:	Prevention: P201 Obtain special instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P261 Avoid breathing spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Hazardous components which must be listed on the label:

Propan-2-ol

Antimony trioxide

2.3 Other hazards

Static-accumulating flammable liquid.
Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Inorganic and organic compounds
Mixture

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Propan-2-ol	67-63-0 200-661-7 01-2119457558-25	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	>= 30 - < 50

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Antimony trioxide	1309-64-4 215-175-0	Carc. 2; H351	>= 10 - < 20
Lead oxide	1317-36-8 215-267-0	Acute Tox. 4; H302 Acute Tox. 4; H332 Carc. 2; H351 Repr. 1A; H360FD Lact.H362 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0.032

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.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.
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.
If easy to do, remove contact lens, if worn.
Get medical attention.
- 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 : Causes serious eye irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer if inhaled.
Repeated exposure may cause skin dryness or cracking.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

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5.1 Extinguishing media

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

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Metal oxides
Sulphur 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 : Remove all sources of ignition.
Ventilate the area.
Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

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.

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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
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 : Ensure all equipment is electrically grounded before beginning transfer operations.
This material can accumulate static charge due to its inherent 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 vapours 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.

Hygiene measures : Ensure that eye flushing systems and safety showers are

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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 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.

Advice on common storage : 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

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.
 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) or contact the Dow Corning customer service group.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Propan-2-ol	67-63-0	TWA	400 ppm 999 mg/m ³	GB EH40
		STEL	500 ppm 1,250 mg/m ³	GB EH40
n-Butyl acetate	123-86-4	TWA	150 ppm 724 mg/m ³	GB EH40
		STEL	200 ppm 966 mg/m ³	GB EH40
Antimony trioxide	1309-64-4	TWA	0.5 mg/m ³ (antimony)	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the			

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long-term exposure should be used				
Molybdenum sulfide	1317-33-5	TWA	10 mg/m ³ (Molybdenum)	GB EH40
		STEL	20 mg/m ³ (Molybdenum)	GB EH40
Lead oxide	1317-36-8	TWA	0.15 mg/m ³ (Lead)	98/24/EC I
Further information	Binding			

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Lead oxide	1317-36-8	Lead (Lead): 0.7 mg/l (Blood)		98/24/EC II

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Propan-2-ol	Workers	Inhalation	Long-term systemic effects	500 mg/m ³
	Workers	Skin contact	Long-term systemic effects	888 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	89 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	319 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	26 mg/kg bw/day
n-Butyl acetate	Workers	Inhalation	Acute systemic effects	960 mg/m ³
	Workers	Inhalation	Acute local effects	960 mg/m ³
	Workers	Inhalation	Long-term systemic effects	480 mg/m ³
	Workers	Inhalation	Long-term local effects	480 mg/m ³
	Consumers	Inhalation	Acute systemic effects	859.7 mg/m ³
	Consumers	Inhalation	Acute local effects	859.7 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	102.34 mg/m ³
	Consumers	Inhalation	Long-term local effects	102.34 mg/m ³
Antimony trioxide	Workers	Inhalation	Long-term local effects	0.5 mg/m ³

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	Workers	Skin contact	Long-term systemic effects	281 mg/kg bw/day
	Consumers	Inhalation	Long-term local effects	0.1 mg/m3
	Consumers	Skin contact	Long-term systemic effects	168.6 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	168.6 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
Propan-2-ol	Fresh water	140.9 mg/l
	Marine water	140.9 mg/l
	Intermittent use/release	140.9 mg/l
	Sewage treatment plant	2251 mg/l
	Fresh water sediment	552 mg/kg
	Marine sediment	552 mg/kg
	Soil	28 mg/kg
n-Butyl acetate	Oral	160 mg/kg
	Fresh water	0.18 mg/l
	Marine water	0.018 mg/l
	Intermittent use/release	0.36 mg/l
	Sewage treatment plant	35.6 mg/l
Antimony trioxide	Fresh water	0.113 mg/l
	Marine water	0.0113 mg/l
	Sewage treatment plant	2.55 mg/l
	Fresh water sediment	11.2 mg/kg
	Marine sediment	2.24 mg/kg
Lead oxide	Soil	37 mg/kg
	Fresh water	6.5 µg/l
	Marine water	3.4 µg/l
	Sewage treatment plant	100 µg/l
	Fresh water sediment	174 mg/kg

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	Marine sediment	164 mg/kg
	Soil	147 mg/kg
	Oral	10.9 mg/kg

8.2 Exposure controls

Engineering measures

Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Use with local exhaust ventilation.

Personal protective equipment

- Eye protection : Wear the following personal protective equipment:
Safety goggles
- Hand protection
Material : Antistatic gloves
Impervious gloves
Flame retardant gloves
- 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.
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).
- 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 : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Colour : grey
- Odour : solvent-like

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Odour 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

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.06

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, kinematic : 15 mm²/s

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight : No data available

SECTION 10: Stability and reactivity

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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 : Highly flammable liquid and vapour.
Vapours may form explosive mixture with air.
Can react with strong oxidizing agents.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Acute toxicity

Not classified based on available information.

Components:

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: vapour

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

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

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Assessment: The substance or mixture has no acute inhalation toxicity

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

Lead oxide:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute inhalation toxicity : LC50 (Rat): > 5.05 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

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

Repeated exposure may cause skin dryness or cracking.

Components:

Propan-2-ol:

Species: Rabbit
Result: No skin irritation

Antimony trioxide:

Species: Rabbit
Result: No skin irritation

Lead oxide:

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

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Propan-2-ol:

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

Antimony trioxide:

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Lead oxide:

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Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:

Propan-2-ol:

Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Antimony trioxide:

Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Lead oxide:

Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Germ cell mutagenicity

Not classified based on available information.

Components:

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

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

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Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Lead oxide:

Genotoxicity in vitro : Test Type: In vitro sister chromatid exchange assay in mam-
malian cells
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo
cytogenetic assay)
Species: Rat
Application Route: Ingestion
Result: positive
Remarks: Based on data from similar materials

Test Type: DNA Repair
Species: Mouse
Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity- As- : Weight of evidence does not support classification as a germ
essment cell mutagen.

Carcinogenicity

Suspected of causing cancer if inhaled.

Components:

Propan-2-ol:

Species: Rat
Application Route: inhalation (vapour)
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 - Assess- : Limited evidence of carcinogenicity in inhalation studies with
ment animals.

Lead oxide:

Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Result: positive
Remarks: Based on data from similar materials

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Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:

Propan-2-ol:

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

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

Antimony trioxide:

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

Lead oxide:

Effects on fertility : Test Type: Fertility
Species: Rat
Application Route: Ingestion
Result: positive
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: positive
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Positive evidence of adverse effects on development from human epidemiological studies., Positive evidence of adverse effects on sexual function and fertility from human epidemiological studies., Studies indicating a hazard to babies during the lactation period

STOT - single exposure

May cause drowsiness or dizziness.

Components:

Propan-2-ol:

Assessment: May cause drowsiness or dizziness.

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STOT - repeated exposure

Not classified based on available information.

Components:

Antimony trioxide:

Exposure routes: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Lead oxide:

Target Organs: Central nervous system, Kidney, Blood

Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Propan-2-ol:

Species: Rat

NOAEL: 5000 ppm

Application Route: inhalation (vapour)

Exposure time: 104 Weeks

Method: OECD Test Guideline 413

Antimony trioxide:

Species: Rat

NOAEL: 1,686 mg/kg

Application Route: Ingestion

Exposure time: 90 Days

Method: OECD Test Guideline 408

Species: Rat

NOAEL: ≥ 0.51 mg/m³

Application Route: inhalation (dust/mist/fume)

Exposure time: 1 yr

Lead oxide:

Species: Rat

NOAEL: 0.0015 mg/kg

LOAEL: 0.005 mg/kg

Application Route: Ingestion

Exposure time: 6 - 12 Months

Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Propan-2-ol:

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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

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 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: 4.5 mg/l
Exposure time: 28 d
Species: Pimephales promelas (fathead minnow)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1.74 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Lead oxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.116 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 0.031 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.027 mg/l

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Exposure time: 72 h
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): 6.59 µg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : EC10: 21.6 µg/l
Exposure time: 30 d
Species: Pimephales promelas (fathead minnow)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 1.84 µg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

12.2 Persistence and degradability

Components:

Propan-2-ol:

Biodegradability : Result: rapidly degradable

12.3 Bioaccumulative potential

Components:

Propan-2-ol:

Partition coefficient: n-octanol/water : log Pow: 0.05

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



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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.
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

14.1 UN number

- ADN : UN 1993
- ADR : UN 1993
- RID : UN 1993
- IMDG : UN 1993
- IATA : UN 1993

14.2 UN proper shipping name

- ADN : FLAMMABLE LIQUID, N.O.S.
(Propan-2-ol, n-Butyl acetate)
- ADR : FLAMMABLE LIQUID, N.O.S.
(Propan-2-ol, n-Butyl acetate)
- RID : FLAMMABLE LIQUID, N.O.S.
(Propan-2-ol, n-Butyl acetate)
- IMDG : FLAMMABLE LIQUID, N.O.S.
(Propan-2-ol, n-Butyl acetate)
- IATA : Flammable liquid, n.o.s.
(Propan-2-ol, n-Butyl acetate)

14.3 Transport hazard class(es)

- ADN : 3
- ADR : 3
- RID : 3
- IMDG : 3
- IATA : 3

14.4 Packing group

- ADN
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
- ADR



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Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : (D/E)

RID
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

IMDG
Packing group : II
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)
Packing instruction (cargo aircraft) : 364
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

IATA (Passenger)
Packing instruction (passenger aircraft) : 353
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

14.5 Environmental hazards

ADN
Environmentally hazardous : no

ADR
Environmentally hazardous : no

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

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

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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.

		Quantity 1	Quantity 2
P5c	FLAMMABLE LIQUIDS	5,000 t	50,000 t

Other regulations : Take note of Dir 94/33/EC on the protection of young people at work.
Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

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.

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.

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.

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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.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Full text of H-Statements

H225 : Highly flammable liquid and vapour.
H302 : Harmful if swallowed.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H336 : May cause drowsiness or dizziness.
H351 : Suspected of causing cancer.
H351 : Suspected of causing cancer if inhaled.
H360FD : May damage fertility. May damage the unborn child.
H362 : May cause harm to breast-fed children.
H372 : Causes damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Carc. : Carcinogenicity
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Lact. : Effects on or via lactation
Repr. : Reproductive toxicity
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
98/24/EC I : Europe.Chemical Agents Directive - Annex I: Binding occupational exposure limit values
98/24/EC II : Chemical Agents Directive - Annex II: Binding biological limit values
GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
98/24/EC I / TWA : Occupational Exposure Limit Value
GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

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 Regula-

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tion; 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

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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