



SAFETY DATA SHEET

VDX - VDX DRY LUBRICANT SPRAY, AEROSOL

According to Regulation (EU) No 453/2010
According to Regulation (EC) No 1907/2006

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name VDX - VDX DRY LUBRICANT SPRAY, AEROSOL
Product No. MCC-VDX

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

Identified uses Lubricant.

1.3. Details of the supplier of the safety data sheet

Supplier MICROCARE EUROPE, BVBA
Havendoklaan 19
1804 Cargovil - Vilvoorde
Belgium
Tel: +32 2 251 95 05

Manufacturer MICROCARE CORPORATION
595 John Downey Drive
New Britain, CT 06051
United States of America
CAGE: OATV9
Tel: +1 860-827-0626
Fax: +1 860-827-8105
techsupport@microcare.com

1.4. Emergency telephone number

0032-2-251-95-05 (9 AM - 5 PM, Mon- Fri)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

| | |
|-------------------------------|-----------------|
| Physical and Chemical Hazards | Not classified. |
| Human health | Not classified. |
| Environment | Not classified. |

Classification (1999/45/EEC)

Not classified.

Human health

Prolonged skin contact may cause redness, irritation and dry skin. Mild dermatitis, allergic skin rash.

Physical and Chemical Hazards

Vapours are heavier than air and may travel along the floor and in the bottom of containers. Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small. Gas or vapour displaces oxygen available for breathing (asphyxiant).

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008

Not classified.

Supplemental label information

EUH210

Safety data sheet available on request.

VDX - VDX DRY LUBRICANT SPRAY, AEROSOL**2.3. Other hazards**

In case of spills, beware of slippery floors and surfaces.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures**

| | |
|---|---|
| HFC-134a Tetrafluoroethane | 90-100% |
| CAS-No.: 811-97-2 | EC No.: 212-377-0 |
| Classification (EC 1272/2008) Not classified. | Classification (67/548/EEC) Not classified. |
| Poly-tfe,omega-hydro-alpha-(methylcyclohexyl) | 1-5% |
| CAS-No.: 65530-85-0 | EC No.: |
| Classification (EC 1272/2008) Not classified. | Classification (67/548/EEC) Not classified. |
| PROPAN-2-OL | 5-10% |
| CAS-No.: 67-63-0 | EC No.: 200-661-7 |
| Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT Single 3 - H336 | Classification (67/548/EEC) F;R11 Xi;R36 R67 |

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures****General information**

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Place unconscious person on the side in the recovery position and ensure breathing can take place. Perform artificial respiration if breathing has stopped. Consult a physician for specific advice.

Inhalation

Remove victim immediately from source of exposure. Move into fresh air and keep at rest. If respiratory problems, artificial respiration/oxygen. Get medical attention.

Ingestion

Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Do not give victim anything to drink if he is unconscious. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention.

Skin contact

Remove contaminated clothes and rinse skin thoroughly with water.

Eye contact

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Consult a physician for specific advice.

4.2. Most important symptoms and effects, both acute and delayed**General information**

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation.

Coughing, chest tightness, feeling of chest pressure. In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects.

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Ingestion

Contact with liquid form may cause frostbite. May cause nausea, headache, dizziness and intoxication.

Skin contact

Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Contact with liquid form may cause frostbite.

Eye contact

Extreme irritation of eyes and mucous membranes, including burning and tearing. Irritation and redness followed by blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

Aerosol containers can explode when heated, due to excessive pressure build-up.

Specific hazards

Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Move container from fire area if it can be done without risk.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Warn everybody of potential hazards and evacuate if necessary. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

6.2. Environmental precautions

Contain spillages with sand, earth or any suitable adsorbent material. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Provide ventilation and confine spill. Do not allow runoff to sewer. Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Collect with absorbent, non-combustible material into suitable containers.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide good ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. In case of spills, beware of slippery floors and surfaces. Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed. Keep out of the reach of children.

7.2. Conditions for safe storage, including any incompatibilities

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

VDX - VDX DRY LUBRICANT SPRAY, AEROSOL

| Name | STD | TWA - 8 Hrs | | STEL - 15 Min | | Notes |
|-------------|-----|-------------|-----------|---------------|------------|-------|
| | | | | | | |
| PROPAN-2-OL | WEL | 400 ppm | 999 mg/m3 | 500 ppm | 1250 mg/m3 | |

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

8.2. Exposure controls**Protective equipment****Engineering measures**

No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation.

Respiratory equipment

Considering the size of the packaging, the risk is regarded as minimal. Vapours are heavier than air and may travel along the floor and in the bottom of containers. At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

Self-contained breathing apparatus with full facepiece.

Hand protection

For prolonged or repeated skin contact use suitable protective gloves. Gloves of nitrile rubber, PVA or Viton are recommended.

Eye protection

Wear approved, tight fitting safety glasses where splashing is probable.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. When using do not eat, drink or smoke.

Skin protection

Wear apron or protective clothing in case of splashes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

| | |
|--|--------------------------------|
| Appearance | Liquid Gas Aerosol. |
| Colour | White / off-white. Waxy |
| Odour | Slight odour of alcohol. |
| Solubility | Slightly soluble in water. |
| Initial boiling point and boiling range | -26.5 (C) / -15.7 (F) |
| Vapour density (air=1) | 3.18 @ 25 (C) / 77 (F) |
| Vapour pressure | 4972 mm Hg 16.7 (C) / 62 (F) |
| Flammability Limit - Lower(%) | Not determined. |
| Flammability Limit - Upper(%) | Not determined. |
| Other Flammability | This product is not flammable. |
| Comments | Aerosol. |

9.2. Other information

| | |
|-------------------------------|--------------------------------|
| Particle Size (Micron) | 1-15 micron |
| Volatility Description | Volatile |
| Volatile By Vol. (%) | 98.5 |
| UDF Phrase 1 | This product is not flammable. |

VDX - VDX DRY LUBRICANT SPRAY, AEROSOL**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions**Hazardous Polymerisation**

Will not polymerise.

10.4. Conditions to avoid

Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

10.5. Incompatible materials**Materials To Avoid**

Alkali metals. Alkali earth metals. Powdered metal.

10.6. Hazardous decomposition products

When heated, toxic and corrosive vapours/gases may be formed. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO₂). Carbon monoxide (CO).

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Other Health Effects**

This substance has no evidence of carcinogenic properties.

Inhalation

Vapours may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness.

Ingestion

May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin contact

Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

Eye contact

May cause temporary eye irritation.

Medical Symptoms

High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

| | |
|-----------------------------|-----------------------------------|
| Name | PROPAN-2-OL |
| Toxic Dose 1 - LD 50 | 5045 mg/kg (oral rat) |
| Toxic Dose 2 - LD 50 | 3600 mg/kg (oral-mouse) |
| Toxic Conc. - LC 50 | 16,000 ppm/1h (inh-rat) |
| Name | HFC-134a Tetrafluoroethane |
| Toxic Dose 1 - LD 50 | >2085 mg/kg (oral rat) |
| Other Health Effects | |

This substance has no evidence of carcinogenic properties.

| | |
|-------------|--|
| Name | Poly-tfe,omega-hydro-alpha-(methylcyclohexyl) |
|-------------|--|

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

The product contains substances which contribute to global warming (greenhouse effect).

12.1. Toxicity

| | |
|-------------------------------------|----------|
| LC 50, 96 Hrs, Fish mg/l | 450 mg/L |
| EC 50, 48 Hrs, Daphnia, mg/l | 980 mg/L |

12.2. Persistence and degradability

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Degradability

The product is not expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

12.4. Mobility in soil

Mobility:

The product contains volatile substances, which may spread in the atmosphere.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

The product contains substances which contribute to global warming (greenhouse effect).

| | |
|------------------------------|--|
| Name | PROPAN-2-OL |
| LC 50, 96 Hrs, Fish mg/l | 9,640 |
| EC 50, 48 Hrs, Daphnia, mg/l | 5102 |
| IC 50, 72 Hrs, Algae, mg/l | >2,000 |
| Name | HFC-134a Tetrafluoroethane |
| LC 50, 96 Hrs, Fish mg/l | 450 |
| EC 50, 48 Hrs, Daphnia, mg/l | 980 |
| Name | Poly-tfe,omega-hydro-alpha-(methylcyclohexyl) |

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Recover and reclaim or recycle, if practical. Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Empty containers must not be burned because of explosion hazard. Aerosol containers can explode when heated, due to excessive pressure build-up. Recover and reclaim or recycle, if practical.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

| | |
|----------------------|---------|
| UN No. (ADR/RID/ADN) | UN1950 |
| UN No. (IMDG) | UN 1950 |
| UN No. (ICAO) | UN 1950 |

14.2. UN proper shipping name

| | |
|----------------------|-----------------------------------|
| Proper Shipping Name | Consumer Commodity ORM-D USA Only |
| Proper Shipping Name | AEROSOLS |

14.3. Transport hazard class(es)

| | |
|----------------------|-----|
| ADR/RID/ADN Class | 2.2 |
| ADR Label No. | 2 |
| IMDG Class | 2.2 |
| ICAO Class/Division | 2.2 |
| ICAO Subsidiary risk | N/A |
| Transport Labels | |

VDX - VDX DRY LUBRICANT SPRAY, AEROSOL**14.4. Packing group**

| | |
|---------------------------|-----|
| ADR/RID/ADN Packing group | N/A |
| IMDG Packing group | N/A |
| ICAO Packing group | N/A |

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

Not applicable.

Emergency Action Code N/A

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant No information required.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Approved Code Of Practice**

Classification and Labelling of Substances and Preparations Dangerous for Supply.

Guidance Notes

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37.

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

National Regulations

The Aerosol Dispensers (EEC Requirements)(Amendment) Regulations 1996 (S.I 1996 No. 2421).

Water hazard classification

N/A.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

| | |
|--------------------------|--------------|
| Revision Date | 01/03/2012 |
| Revision | 5 |
| Supersedes date | 11/01/2012 |
| Safety Data Sheet Status | Approved. |
| Date | 1-March-2012 |

Risk Phrases In Full

| | |
|-----|---|
| R11 | Highly flammable |
| R36 | Irritating to eyes. |
| R67 | Vapours may cause drowsiness and dizziness. |

VDX - VDX DRY LUBRICANT SPRAY, AEROSOL

Hazard Statements In Full

| | |
|------|-------------------------------------|
| H319 | Causes serious eye irritation. |
| H225 | Highly flammable liquid and vapour. |
| H336 | May cause drowsiness or dizziness. |

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.