



## SAFETY DATA SHEET

### VDX DRY LUBRICANT SPRAY, AEROSOL

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

#### 1. Identification

##### Product identifier

**Product name** VDX DRY LUBRICANT SPRAY, AEROSOL

**Product number** MCC-VDX, MCC-VDX127

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

**Application** Lubricant.

##### Details of the supplier of the safety data sheet

**Supplier** MICROCARE CORPORATION

**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

##### Emergency telephone number

**Emergency telephone** CHEMTREC 1-800-424-9300 (within the U.S.)  
+1 703-741-5970 (from anywhere in the world)

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

**OSHA Regulatory Status** This Product is Not Hazardous under the OSHA Hazard Communication Standard.

**Physical hazards** Not Classified

**Health hazards** Not Classified

**Environmental hazards** Not Classified

**Human health** Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Mild dermatitis, allergic skin rash.

**Physicochemical** Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers. Not considered to be a significant hazard due to the small quantities used. Gas or vapor displaces oxygen available for breathing (asphyxiant).

##### Label elements

**Hazard statements** NC Not Classified

## VDX DRY LUBRICANT SPRAY, AEROSOL

**Precautionary statements**

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.  
 P211 Do not spray on an open flame or other ignition source.  
 P251 Pressurized container: Do not pierce or burn, even after use  
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
 P501 Dispose of contents/ container in accordance with local regulations.

**Supplemental label information**

Safety data sheet available on request. For use in industrial installations only.

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

### 3. Composition/information on ingredients

#### Mixtures

<b>HFC-134a Tetrafluoroethane</b>	<b>60-100%</b>
CAS number: 811-97-2	
<b>Classification</b>	
Press. Gas, Liquefied - H280	
<b>PROPAN-2-OL</b>	<b>1-5%</b>
CAS number: 67-63-0	
<b>Classification</b>	
Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H336	
<b>Poly-tfe, omega-hydro-alpha-(methylcyclohexyl)</b>	<b>1-5%</b>
CAS number: 65530-85-0	
<b>Classification</b>	
Not Classified	

The full text for all hazard statements is displayed in Section 16.

**Composition comments**

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of CFR 1900.1200 TSCA: The ingredients of this product are on the TSCA Inventory.

### Composition

### 4. First-aid measures

#### Description of first aid measures

**General information**

Never give anything by mouth to an unconscious person. Do not induce vomiting. Place unconscious person on the side in the recovery position and ensure breathing can take place. If breathing stops, provide artificial respiration. Consult a physician for specific advice.

**Inhalation**

Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

## VDX DRY LUBRICANT SPRAY, AEROSOL

<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention.
<b>Skin Contact</b>	Remove contaminated clothing and rinse skin thoroughly with water.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Consult a physician for specific advice.

### Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Coughing, chest tightness, feeling of chest pressure. Vapors in high concentrations are anesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.
<b>Ingestion</b>	Contact with liquid form may cause frostbite. May cause nausea, headache, dizziness and intoxication.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Contact with liquid form may cause frostbite.
<b>Eye contact</b>	Severe irritation, burning and tearing. Irritation and redness, followed by blurred vision.

### Indication of immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	No specific recommendations. If in doubt, get medical attention promptly.
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## 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.
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### Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapors. Aerosol containers can explode when heated, due to excessive pressure build-up.
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### Advice for firefighters

<b>Protective actions during firefighting</b>	Move containers from fire area if it can be done without risk. Bursting aerosol containers may be propelled from a fire at high speed.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level.
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### Environmental precautions

<b>Environmental precautions</b>	Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.
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### Methods and material for containment and cleaning up

## VDX DRY LUBRICANT SPRAY, AEROSOL

**Methods for cleaning up** Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely.

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Provide adequate ventilation. Avoid inhalation of vapors/spray and contact with skin and eyes. In case of spills, beware of slippery floors and surfaces. Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapors. Keep out of the reach of children.

#### Conditions for safe storage, including any incompatibilities

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

#### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

**Usage description** Lubricant.

**Reference to other sections.** Store away from incompatible materials (see Section 10).

### 8. Exposure Controls/personal protection

#### Control parameters

#### Occupational exposure limits

##### HFC-134a Tetrafluoroethane

Long-term exposure limit (8-hour TWA): OES 4240 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): OES

##### PROPAN-2-OL

Long-term exposure limit (8-hour TWA): OSHA 400 ppm 980 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 492 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): ACGIH 400 ppm 984 mg/m<sup>3</sup>

A4

OSHA = Occupational Safety and Health Administration.  
ACGIH = American Conference of Governmental Industrial Hygienists.  
A4 = Not Classifiable as a Human Carcinogen.

#### **Additional Occupational Exposure Limits**

**Ingredient comments** WEL = Workplace Exposure Limits ACGIH = US Standard.

#### Exposure controls

#### **Protective equipment**



## VDX DRY LUBRICANT SPRAY, AEROSOL

<b>Appropriate engineering controls</b>	No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.
<b>Eye/face protection</b>	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Nitrile rubber. Polyvinyl alcohol (PVA). Viton rubber (fluoro rubber).
<b>Other skin and body protection</b>	Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.
<b>Hygiene measures</b>	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. When using do not eat, drink or smoke.
<b>Respiratory protection</b>	Considering the size of the packaging, the risk is regarded as minimal. Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers. In confined or poorly-ventilated spaces, a supplied-air respirator must be worn. Wear self-contained breathing apparatus with full facepiece.

### 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Aerosol.
<b>Color</b>	White/off-white. Waxy solid.
<b>Odor</b>	Slight alcoholic.
<b>Odor threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting point</b>	No information available.
<b>Initial boiling point and range</b>	-26.5°C/-15.7°F @ 101.3 kPa
<b>Flash point</b>	The product is not flammable.
<b>Evaporation rate</b>	No information available.
<b>Evaporation factor</b>	No information available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Other flammability</b>	The product is not flammable.
<b>Vapor pressure</b>	663 kPa @ 25°C
<b>Vapor density</b>	3.18 @ 25 (C) / 77 (F)
<b>Relative density</b>	No information available.
<b>Bulk density</b>	Not applicable.
<b>Solubility(ies)</b>	Slightly soluble in water.
<b>Partition coefficient</b>	No information available.
<b>Auto-ignition temperature</b>	No information available.

## VDX DRY LUBRICANT SPRAY, AEROSOL

<b>Decomposition Temperature</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Comments</b>	Aerosol.
<b>Refractive index</b>	No information available.
<b>Particle size</b>	1-15 micron
<b>Molecular weight</b>	No information available.
<b>Volatility</b>	98.5%
<b>Saturation concentration</b>	No information available.
<b>Critical temperature</b>	No information available.
<b>Flammability</b>	The product is not flammable.

### 10. Stability and reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Possibility of hazardous reactions</b>	Will not polymerize.
<b>Conditions to avoid</b>	Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapors.
<b>Materials to avoid</b>	Alkali metals. Alkaline earth metals. Powdered metal.
<b>Hazardous decomposition products</b>	Heating may generate the following products: Toxic and corrosive gases or vapors. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO).

### 11. Toxicological information

#### Information on toxicological effects

<b>Other health effects</b>	There is no evidence that the product can cause cancer.
<b>Inhalation</b>	Vapors may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing.
<b>Ingestion</b>	May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.
<b>Skin Contact</b>	Product has a defatting effect on skin. May cause allergic contact eczema.
<b>Eye contact</b>	May cause temporary eye irritation.
<b>Medical Symptoms</b>	Gas or vapor in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting.

#### Toxicological information on ingredients.

#### HFC-134a Tetrafluoroethane

## VDX DRY LUBRICANT SPRAY, AEROSOL

**Other health effects**                    There is no evidence that the product can cause cancer.

**Acute toxicity - inhalation**

**Acute toxicity inhalation**            567,000.0  
(LC<sub>50</sub> gases ppmV)

**Species**                                    Rat

**ATE inhalation (gases**                567,000.0  
**ppm)**

### PROPAN-2-OL

**Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub>**                5,800.0  
**mg/kg)**

**Species**                                    Rat

**ATE oral (mg/kg)**                        5,800.0

**Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub>**            13,000.0  
**mg/kg)**

**Species**                                    Rabbit

**ATE dermal (mg/kg)**                    13,000.0

**Acute toxicity - inhalation**

**Acute toxicity inhalation**            16,000.0  
(LC<sub>50</sub> vapours mg/l)

**Species**                                    Rat

**ATE inhalation (vapours**                16,000.0  
**mg/l)**

**Carcinogenicity**

**IARC carcinogenicity**                IARC Group 3    Not classifiable as to its carcinogenicity to humans.

**NTP carcinogenicity**                Not listed.

**OSHA Carcinogenicity**                Not listed.

## 12. Ecological Information

**Ecotoxicity**                                The product contains a substance or substances that will contribute to global warming (greenhouse effect).

**Acute toxicity - fish**                    LC<sub>50</sub>, 96 hours: 450 mg/L mg/l, Fish

**Acute toxicity - aquatic**                EC<sub>50</sub>, 48 hours: 980 mg/L mg/l, Daphnia magna  
**invertebrates**

**Ecological information on ingredients.**

### HFC-134a Tetrafluoroethane

**Acute toxicity - fish**                    LC<sub>50</sub>, 96 hours: 450 mg/l, Fish

## VDX DRY LUBRICANT SPRAY, AEROSOL

**Acute toxicity - aquatic invertebrates**      EC<sub>50</sub>, 48 hours: 980 mg/l, Daphnia magna

### PROPAN-2-OL

**Acute toxicity - fish**      LC<sub>50</sub>, 96 hours: 9,640 mg/l, Fish

**Acute toxicity - aquatic invertebrates**      EC<sub>50</sub>, 48 hours: 5102 mg/l, Daphnia magna

**Acute toxicity - aquatic plants**      IC<sub>50</sub>, 72 hours: >2,000 mg/l, Algae

### Persistence and degradability

**Persistence and degradability**      The product is not expected to be biodegradable.

### Bioaccumulative potential

**Bio-Accumulative Potential**      No data available on bioaccumulation.

**Partition coefficient**      No information available.

### Ecological information on ingredients.

### HFC-134a Tetrafluoroethane

**Partition coefficient**      Pow: 1.06

### PROPAN-2-OL

**Partition coefficient**      : 0.05

### Mobility in soil

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

### Other adverse effects

**Other adverse effects**      The product contains a substance or substances that will contribute to global warming (greenhouse effect).

## 13. Disposal considerations

### Waste treatment methods

**General information**      Reuse or recycle products wherever possible. Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Disposal methods**      Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Empty containers must not be punctured or incinerated because of the risk of an explosion. Aerosol containers can explode when heated, due to excessive pressure build-up. Reuse or recycle products wherever possible.

## 14. Transport information

### UN Number

**UN No. (IMDG)**      UN1950

**UN No. (ICAO)**      UN1950

### UN proper shipping name



## VDX DRY LUBRICANT SPRAY, AEROSOL

**Proper shipping name (TDG)** LIMITED QUANTITY

**Proper shipping name (IMDG)** UN1950 AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY

**Proper shipping name (ICAO)** UN1950 AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY

**Proper shipping name (DOT)** LIMITED QUANTITY

### Transport hazard class(es)

**IMDG Class** 2.2 LIMITED QUANTITY

**ICAO class/division** 2.2 LIMITED QUANTITY

**ICAO subsidiary risk** N/A

### Packing group

**TDG Packing Group** N/A

**IMDG packing group** N/A

**ICAO packing group** N/A

**DOT packing group** N/A

### Environmental hazards

**Environmentally Hazardous Substance**

No.

### Special precautions for user

Not applicable.

**EmS** F-C, S-V

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not relevant. No information required.

## 15. Regulatory information

### US Federal Regulations

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

Not listed.

**CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

Not listed.

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

Not listed.

**SARA 313 Emission Reporting**

Not listed.

**CAA Accidental Release Prevention**

Not listed.

**SARA (311/312) Hazard Categories**

Pressure

## VDX DRY LUBRICANT SPRAY, AEROSOL

### OSHA Highly Hazardous Chemicals

Not listed.

### US State Regulations

#### California Proposition 65 Carcinogens and Reproductive Toxins

Not listed.

#### California Air Toxics "Hot Spots" (A-I)

*PROPAN-2-OL*

Present.

#### California Air Toxics "Hot Spots" (A-II)

Not listed.

#### California Directors List of Hazardous Substances

*PROPAN-2-OL*

Present.

#### Massachusetts "Right To Know" List

*PROPAN-2-OL*

Present.

#### Rhode Island "Right To Know" List

*PROPAN-2-OL*

Present.

#### Minnesota "Right To Know" List

*PROPAN-2-OL*

Present.

*HFC-134a Tetrafluoroethane*

Present.

#### New Jersey "Right To Know" List

*PROPAN-2-OL*

Present.

#### Pennsylvania "Right To Know" List

*PROPAN-2-OL*

Present.

### Inventories

#### Canada - DSL/NDSL

Yes

#### US - TSCA

Yes

### 16. Other information

#### Revision comments

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

#### Revision date

4/4/2017

**VDX DRY LUBRICANT SPRAY, AEROSOL**

<b>Revision</b>	30
<b>Supersedes date</b>	3/13/2017
<b>SDS No.</b>	AEROSOL - VDX
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H225 Highly flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

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.