



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: + 1 800 638 0125, +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

Physical hazards Press. Gas, Compressed - H280

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

Pictogram



VDX DRY LUBRICANT SPRAY, AEROSOL

Signal word	Warning
Hazard statements	H280 Contains gas under pressure; may explode if heated.
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	EUH210 Safety data sheet available on request. RCH001a 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

HFC-134a Tetrafluoroethane	60-100%
CAS number: 811-97-2	
Classification Press. Gas, Liquefied - H280	
PROPAN-2-OL	1-5%
CAS number: 67-63-0	
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H335	
Poly-tfe, omega-hydro-alpha-(methylcyclohexyl)	1-5%
CAS number: 65530-85-0	
Classification 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.
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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.
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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.
Ingestion	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.
Skin Contact	Remove contaminated clothing and rinse skin thoroughly with water.
Eye contact	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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	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.
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 irritation, redness and dermatitis. Contact with liquid form may cause frostbite.
Eye contact	Severe irritation, burning and tearing. Irritation and redness, followed by blurred vision.

Indication of immediate medical attention and special treatment needed

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

Extinguishing media

Suitable extinguishing media	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

Specific hazards	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

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	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

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Environmental precautions Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.

Methods and material for containment and cleaning up

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/m³

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

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): OSHA 400 ppm 980 mg/m³

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 492 mg/m³

Short-term exposure limit (15-minute): ACGIH 400 ppm 984 mg/m³

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

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Protective equipment



Appropriate engineering controls

No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.

Eye/face protection

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.

Hand protection

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).

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures

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.

Respiratory protection

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

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

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Bulk density	Not applicable.
Solubility(ies)	Slightly soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Comments	Aerosol.
Refractive index	No information available.
Particle size	1-15 micron
Molecular weight	No information available.
Volatility	98.5%
Saturation concentration	No information available.
Critical temperature	No information available.
Flammability	The product is not flammable.

10. Stability and reactivity

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

11. Toxicological information

Information on toxicological effects

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

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Medical Symptoms 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

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

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ gases ppmV) 567,000.0

Species Rat

ATE inhalation (gases ppm) 567,000.0

PROPAN-2-OL

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 16,000.0

ATE inhalation (vapours mg/l) 16,000.0

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 LC₅₀, 96 hours: 450 mg/L mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 980 mg/L mg/l, Daphnia magna

Ecological information on ingredients.

HFC-134a Tetrafluoroethane

Acute toxicity - fish LC₅₀, 96 hours: 450 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 980 mg/l, Daphnia magna

PROPAN-2-OL

Acute toxicity - fish LC₅₀, 96 hours: 9,640 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 5102 mg/l, Daphnia magna

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Acute toxicity - aquatic plants IC₅₀, 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) 1950

UN No. (ICAO) 1950

UN proper shipping name

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

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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

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.

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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	10/3/2017
Revision	33
Supersedes date	4/11/2017
SDS No.	AEROSOL - VDX
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated. H319 Causes serious eye irritation. H335 May cause respiratory irritation.

VDX DRY LUBRICANT SPRAY, AEROSOL

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.