

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health
Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



IDENTITY (As Used on Label and List)

Vector Spray

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

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|--|--|
| Manufacturer's Name Vector R & D Inc. | Emergency Telephone Number 253-564-5084 |
| Address (Number, Street, City, State, and ZIP Code) 6824 19 th St # 230 University Place WA 98466 | Telephone Number for Information 253-564-5084 |
| | Date Prepared 1-1-07 |
| | Signature of Preparer (optional) |

Section II - Hazardous Ingredients/Identity Information

| Hazardous Components (Specific Chemical Identity; Common Name(s)) | OSHA PEL | ACGIH TLV | Other Limits Recommended | %(optional) |
|---|-----------|-----------|--------------------------|-------------|
| N-Octane (CAS# 11-65-9) | 300PPM | 300PPM | 375 PPM OSHA STEL | |
| Propane / Butane 3,5 | | | | |
| Propane (CAS # 74-98-6) | 1,000 PPM | N/A | | |
| Butane (CAS# 106-97-8) | 800 PPM | 800 PPM | | |

Section III - Physical/Chemical Characteristics

| | | | |
|---|---------|---|---------|
| Boiling Point | - 0.5°C | Specific Gravity (H ₂ O = 1) | 1,045 |
| Vapor Pressure (mm Hg) At 0 °C | 900 | Melting Point | - 138°C |
| Vapor Density (AIR = 1) At 20° C | .548 | Evaporation Rate (Butyl Acetate = 1) | 168 |
| Solubility in Water 6.6 x 10 ⁻⁶ % (Octane) | | | |
| Appearance and Odor Butane/Propane: Clear, Odorless Gas Octane: Clear liquid, Faint odor | | | |

Section IV - Fire and Explosion Hazard Data

| | | | |
|---|--------------------------------------|-------------|-------------|
| Flash Point (Method Used) -80° C (Gas) | Flammable Limits Propane / Butane | LEL 1.5% | UEL 8.4% |
| Extinguishing Media CO ₂ , FOAM, Drychemical, Powder-Class A-O | | | |
| Special Fire Fighting Procedures Same as Propane / Butane | | | |
| Unusual Fire and Explosion Hazards Dangerous when exposed to high heat or flames | | | |

(Reproduce locally)

OSHA 174, Sept. 1985

Section V - Reactivity Data

| | | | |
|---|----------------|---|---|
| Stability | Unstable | | Conditions to Avoid High Heat or Flame |
| | Stable | X | |
| Incompatibility (<i>Materials to Avoid</i>) Strong Oxidizers (Chlorine, Flourine, Bromine) | | | |
| Hazardous Decomposition or Byproducts None | | | |
| Hazardous Polymerization | May Occur | | Conditions to Avoid |
| | Will Not Occur | X | |

Section VI - Health Hazard Data

| | | | |
|--|-----------------|----------------------|---------------------|
| Route(s) of Entry: | Inhalation? YES | Skin? YES | Ingestion? YES |
| Health Hazards (<i>Acute and Chronic</i>) No danger under normal use | | | |
| Propane/Butane: Long term inhalation effects respiration | | | |
| Octane: Long term exposure may de-fat and irritate skin. Poisonous if swallowed. | | | |
| Carcinogenicity: NO | NTP? N/A | IARC Monographs? N/A | OSHA Regulated? YES |
| Signs and Symptoms of Exposure Propane / Butane: Dizzines, disorientation, fainting. Direct acute skin exposure may cause frostbite. Octane: Drying of skin, mucous membranes. Itching, burning, dermatitis. | | | |
| Medical Conditions Generally Aggravated by Exposure NONE | | | |
| Emergency and First Aid Procedures: Propane / Butane: Remove to fresh air, administer oxygen. Resuscitate if breathing stops. Octane: Flush with water. If swallowed, induce vomiting. Call physician. | | | |

Section VII - Precautions for Safe Handling and Use

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|---|---|
| Steps to Be Taken in Case Material is Released or Spilled | Generally ventilate area, remove all ignition sources. Use standard oil drying compound to collect spill. |
| Waste Disposal Method | Same as for waste oil. Do not mix with acids or oxidizing agents |
| Precautions to Be taken in Handling and Storing | Protect for heat and sunlight. Do not pierce or incinerate, even after use. Do not expose to flame or incandescent materials. |
| Other Precautions | Do not incinerate after use. |

Section VIII - Control Measures

| | |
|--|--|
| Respiratory Protection (<i>Specify Type</i>) None Needed under normal use | |
| Ventilation | Local Exhaust None Needed |
| | Mechanical (<i>General</i>) Local building code for ventilation |
| | Special None Needed |
| | Other N/A |
| Protective Gloves | None needed under normal use |
| Eye Protection | None needed under normal use |
| Other Protective Clothing or Equipment None needed under normal use | |
| Work/Hygienic Practices None | |