

Material Safety Data Sheet



Section 1: PRODUCT AND COMPANY IDENTIFICATION

Vi-Jon Incorporated
8515 Page Avenue
Saint Louis, MO 63114

Phone: 314-427-1000
In Case of Spill Emergency Contact:
Chemtrec: 1-800-424-9300

Product Name: Silver Hand Sanitizer Spray
Product Code: 183
Product Use: Hand Sanitizer
Issue Date: 05/21/2008
Supersedes Date: None

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Keep out of reach of children.
Appearance/Odor: A clear liquid with a herbal scent.

WARNING:

Flammable (ethyl alcohol)
Target (ethyl alcohol) respiratory system, skin, eyes, CNS, liver, blood and reproductive system.

Potential Health Effects: See Section 11 for more information.

Symptoms of Exposure:

Inhalation: May cause irritation of the respiratory tract.
Ingestion: May cause nausea, vomiting and diarrhea.
Eyes: May cause irritation to the eyes.
Skin: None expected.

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

This material contains components that are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Environmental Effects: See Section 12 for more information.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS#	% by Wt.
Ethyl Alcohol	64-17-5	59%
Silver	7440-22-4	Not Available

Section 4: FIRST AID MEASURES

Emergency first aid procedures by route of exposure:

- Inhalation:** If symptoms are experienced, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting. If the material is swallowed, get medical attention or advice.
- Skin:** If irritation is experienced, flush with water. If irritation persists, get medical attention.
- Eyes:** Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, get medical attention.

Section 5: FIRE FIGHTING MEASURES

Flash Point: 71°F (21.6°C)

Method Used: ASTM D 93

Lower Flammable Limit: 3.3 (Volume % in air)

Upper Flammable Limit: 19.0 (Volume % in air)

Auto Ignition: (Ethyl Alcohol) 363°C

Flammability Classification: Flammable Liquid IB

Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

Products of Combustion: Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

Fire Fighting Equipment/Instructions: Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

NFPA Rating: Health:2 Fire: 3 Reactivity:0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: For large spills wear gloves, safety glasses and when levels exceed OSHA PEL use appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Environmental Precautions: Prevent discharge to open waters.

Method for Containment: Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

Methods for Clean-Up: Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

Section 7: HANDLING AND STORAGE

Handling: Keep away from heat, sparks and flame. Prevent contact with eyes. Avoid inhalation.

Storage: Keep the container tightly closed and in a cool, well ventilated place.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Ethyl Alcohol (64-17-5)

ACGIH: 1,000 ppm TWA
OSHA: 1,000 ppm TWA; 1,900 mg/m³ TWA

Silver (7440-22-4)

ACGIH: 0.1 mg/m³ TWA (dust and fume)
OSHA: 0.01 mg/m³ TWA

Engineering Controls: Normal room ventilation is usually adequate under normal use.

Personal Protective Equipment (PPE)

Eye/Face Protection: None needed under normal use.

Skin Protection: None needed under normal use.

Respiratory Protection: None needed under normal use.

General Hygiene Considerations: None needed under normal use.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Color: Clear Liquid

Odor: Herbal

Physical State: Liquid

pH: Not Available.

Vapor Density: (Ethyl Alcohol) 1.6

Boiling Point: (Ethyl Alcohol) 78.5°C

Vapor Pressure: (Ethyl Alcohol) 57.3 hPa at 20°C

Melting Point: (Ethyl Alcohol) -114.1°C

Freezing Point: Not Available

Flash Point (see section 5)

Flammability Properties (see section 5)

Solubility (in water): Soluble

Specific Gravity @ 25°C: Not Available

Evaporation Rate: Not Available

Octanol/Water partition coefficient (K_{ow}): (Ethyl Alcohol): - 0.32

Auto-ignition temperature: (Ethyl Alcohol) 363°C

Decomposition temperature: Not Available

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal ambient temperatures 70°C (21°C)

Condition to Avoid: Avoid excessive heat or sources of ignition.

Incompatible Materials: This product reacts with strong acid, strong bases, and oxidizing agents.

Hazardous Decomposition: upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

Hazardous Reactions: Hazardous polymerization will not occur.

Section 11: TOXICOLOGY INFORMATION

ACUTE EFFECTS:**A: General Product information**

Product contains ethyl alcohol and silver.

B: Component Analysis LD50

Ethyl Alcohol (64-17-5)

Oral LD50 Rat: 7060 mg/kg

Silver (7440-22-4)

Oral LD50 Rat: >2000 mg/kg

CHRONIC EFFECTS:**Component**

Ethyl Alcohol (64-17-5)

Carcinogenicity: ACGIH A4 – Not Classifiable as a Human Carcinogen

Neurotoxicity: This product contains ethyl alcohol, a central nervous system target.

Mutagenicity: No information available for product.

Reproductive: No information available for product.

Developmental: Ethyl alcohol is a developmental toxin when consumed during pregnancy.

Target Organs: When consumed, ethyl alcohol can target the respiratory system, skin, eyes, CNS, liver, blood and reproductive system.

Silver (7440-22-4)

Carcinogenicity: No information available for product.

Neurotoxicity: No information available for product.

Mutagenicity: No information available for product.

Reproductive: No information available for product.

Developmental: No information available for product.

Target Organs: Nasal septum, skin, eyes (dust).

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Ethyl Alcohol (64-17-5)

96 hour LC50 Oncorhynchus mykiss: 12,900 mg/L (flow-through) (30days old)

96 hour LC50 Pimephales promelas 14.2 mg/L

5 min EC50 Photobacterium phosphoreum: 35,470 mg/L

30 min EC50 Photobacterium phosphoreum: 34,634 mg/L

48 hour EC50 Daphnia magna: 9,268 mg/L

24 hour EC50 Daphnia magna: 10,800 mg/L

Ecotoxicity: Silver (7440-22-4)

96 Hr LC50 Pimephales promelas: 5.6-7.4 ug/L [flow through]

96 Hr LC50 Pimephales promelas: 9.4-9.7 ug/L [static]

96 Hr LC50 Oncorhynchus mykiss: 0.0076 mg/L

96 Hr LC50 Lepomis macrochirus: 24.2-48.4 ug/L

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state, and local regulations.

Section 14: TRANSPORTATION INFORMATION

Shipping Name: Consumer Commodity ORM-D
Proper Shipping Name for Non-Consumer Commodity: Ethyl Alcohol Solutions, 3, UN1170, PGIII.

Section 15: REGULATORY INFORMATION

Ethyl alcohol, a component of this product, is on the TSCA inventory.
Silver, a component of this product, is on the TSCA inventory and CERCLA/SARA

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This material contains ethyl alcohol a developmental toxicity when in alcoholic beverages.

The following components appear on one or more of the following state hazardous substance lists:

Component	CAS#	CA	MA	MN	NJ	PA
Silver	7440-22-4	Yes	Yes	Yes	Yes	Yes
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes

Section 16: Other Information

Prepared by: Vi-Jon Inc.

Disclaimer:

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