



ISOPROPYL ALCOHOL 70% SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: VeraSIL Antiseptic Skin Cleanser
Product Form: Active Ingredient - Isopropanol 70% v/v Mixture
Other Identification: CAS# 67-63-0
Formula: C38H0

Recommended use and restrictions: **Antiseptic Skin Cleanser** to kill harmful bacteria on the Hands and Wrists. Apply and Rub till Dry. No Water Rinse Required. Do not for use on children under 2 years old.

Supplier Details:

Manufacturer: DDSource Manufacturing Inc
Address: Unit 101 - 3525 191St
City, Province, Postal: Surrey, BC Canada V3Z 0P6
Emergency Telephone Number: (855) 545-1800 For Sale in Canada only.

SECTION 2 HAZARDS IDENTIFICATION

Flam. Liq 2 H225
Eye Irrit. 2A H319
STOT SE 3 H339

GHS label elements, including precautionary statements





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Signal Word:

DANGER

Hazard statement(s)

H225 Highly flammable liquid and vapor
H319 Causes serious eye irritation
H336 May cause drowsiness

Precautionary Statement(s)

P501 Dispose of contents and container according to federal and Provincial and municipal regulations.

P305 + P351 + P338 + P337 + P313 + P337 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical attention

P304 + P340 If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P370 + P378 In case of Fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.

P312 Call a doctor if you feel unwell

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking

P233 Keep container tightly closed.

P403 Store in well ventilated place.

P405 Store Locked Up.

P264 Wash hands thoroughly after handling.

P280 Wear Eye protection.

P261 Avoid breathing mist, sprays vapours

P271 Use only outdoors or in well ventilated area.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

| | % | CAS No. | Symbol |
|--------------------------------|----------|-----------|--------|
| Isopropyl alcohol (2-Propanol) | 70 | 67-63-0. | C38H0 |
| Deionized Water | 29.9990% | 7732-18-5 | H2O |
| Hydrogen Peroxide | 1% | 7722-84-1 | H2O2 |
| Silver | 0.0003% | 7440-22-4 | Ag |



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SECTION 4 FIRST AID MEASURES

General First-aid measures: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.

First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. Call Local Poison Information Centre. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.

Symptoms/injuries after inhalation: EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.

Symptoms/injuries after skin contact: Dry skin.

Symptoms/injuries after eye contact: Irritation of the eye tissue.

Symptoms/injuries after ingestion: AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration.

Chronic symptoms: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.



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SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media: Suitable extinguishing media included Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide. Unsuitable extinguishing media: Solid water jet ineffective as extinguishing medium.

Special hazards arising from the substance or mixture Fire hazard: DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

Explosion hazard: DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

Reactivity: Upon combustion: CO and CO₂ are formed. Violent to explosive reaction with (strong) oxidizers. Prolonged storage/in large quantities: may form peroxides.

Advice for firefighters - Firefighting Instructions: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

Protection during firefighting: Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6 ACCIDENTAL RELEASE MEASURES.

Personal precautions, protective equipment and emergency procedures: For non-emergency personnel

Protective equipment: Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

Emergency procedures: Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosion proof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.



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SAFETY DATA SHEET

For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Stop leak if safe to do so. Ventilate area.

Environmental Precautions: Prevent spreading in sewers.

Methods and material for containment and cleaning up

For containment: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

Methods for cleaning up: Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

SECTION 7

HANDLING AND STORAGE

Precautions for safe handling: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

Hygiene Measures: Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.



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Conditions for safe storage, including any incompatibilities:

Incompatible products: Oxidizing agent. silver nitrate. Sodium hypochlorite.

Incompatible materials: Direct sunlight. Heat sources. Sources of ignition.

Heat and ignition sources: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. amines. halogens.

Storage area: Store in a cool area. Store in a dry area. Ventilation at floor level. Fireproof store-room. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. May be stored under nitrogen. Meet the legal requirements.

Special rules on packaging: SPECIAL REQUIREMENTS: closing. with pressure relief valve. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials: SUITABLE MATERIAL: stainless steel. monel steel. carbon steel. copper. nickel. bronze. glass. Teflon. polyethylene. polypropylene. zinc. MATERIAL TO AVOID: steel with rubber inner lining. aluminum.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values: Occupational Exposure Limits

Isopropanol 70% v/v

| Source | Type | Value |
|---------------|------|--------------------------------|
| US (OSHA PEL) | TWA | 4000 ppm/980 mg/m ³ |
| US (ACGIH) | TWA | 200 ppm |
| US (ACGIH) | STEL | 200 ppm |

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.



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Materials for protective clothing: GIVE EXCELLENT RESISTANCE: butyl rubber, nitrile rubber, viton, polyethylene/ethylenevinylalcohol. GIVE GOOD RESISTANCE: neoprene. GIVE LESS RESISTANCE: PVC, neoprene/natural rubber. GIVE POOR RESISTANCE: natural rubber, polyethylene, PVA.

Hand protection: VERASIL NITRILE Gloves.

Eye protection: Safety glasses.

Skin and body protection: Protective clothing.

Respiratory protection: Wear gas mask with filter type A if conc. in air > exposure limit

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------------|---|
| Physical State: | Liquid. Colorless liquid. Invisable Vapor |
| Odor: | Alcohol odor, stuffy, mild odor |
| Odor Threshold: | None |
| pH: | 6.5 - 8.0 |
| Melting point/freezing point: | No data available |
| Boiling point: | 82 degrees Celsius |
| Flash point: | None |
| Evaporation rate: | 2.3 (butylacetate=1), 21 (ether = 1) |
| Flammability: | Flammable |
| Upper flammability (% by volume): | 2-13 vol %, |
| Lower flammability (% by volume): | 50 - 335g/m3 |
| Vapor pressure: | 44hPa, 229hPa at 50 degrees Celcius |
| Vapor density: | 2.1 at 20 degrees Celcius |
| Relative Density: | 0.88 g/mL |
| Solubility: | soluble in water |
| Critical Pressure | 47600 hPa |
| Partition Coefficient: | No data available |
| Auto-ignition temperature: | 399 degrees Celcius |
| Molecular Weight | 60.10 g/mol |
| Minimum Ignition Energy | 0.65 mJ |
| Specific Conductivity | 5.8uS/m |
| Saturation Concentration | 106 g/m3 |



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|------------------------------|--|
| VOC Content | 100% |
| Decomposition temperature: | No data available |
| Viscosity: | 25000 – 65000 cP |
| Median Silver Particle Size: | <0.01 micrometer |
| Other properties | Gas/vapor heavier than air at 20 degrees Celcius. Clear. Volatile |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| Reactivity | Upon combustion: CO and CO ₂ are formed. Violent to explosive reaction with (strong) oxidizer. Pro longed storage/in large quantities: may form peroxides. |
| Chemical Stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | No additional information available |
| Conditions to avoid (e.g., static discharge, shock or vibration) | Direct sunlight. Heat. High temperature. |
| Incompatible materials. | Open flame. Sparks Incompatible materials May react violently with alkalis. May react violently with acids. |
| Hazardous decomposition products | Carbon dioxide. Carbon monoxide. |

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity: Not classified

**Isopropanol 70% v/v 67-63-0
LD50 oral rat**

5045 mg/kg (5840 mg/kg bodyweight; Rat; Rat; Experimental value, 5840 mg/kg bodyweight; Rat; Rat; Experimental value)



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| | |
|--|---|
| LD50 dermal rabbit | 12870 mg/kg (16.4; Rabbit; Rabbit; Experimental value, 16.4; Rabbit; Rabbit; Experimental value) |
| LC50 inhalation rat (mg/l) | 73 mg/l/4h (Rat) |
| Water (7732-18-5) | |
| LD50 oral rat | ≥ 90000 mg/kg |
| Skin corrosion/irritation: | Not classified |
| Serious eye damage/irritation: | Causes serious eye irritation. |
| Respiratory or skin sensitisation: | Not classified |
| Germ cell mutagenicity: | Not classified |
| Carcinogenicity: | Not classified |
| Isopropanol 70% v/v 67-63-0 IARC group | 3 – Not classifiable |
| Reproductive toxicity: | Not classified |
| Specific target organ toxicity (single exposure): | May cause drowsiness or dizziness. |
| Specific target organ toxicity (repeated exposure): | Not classified |
| Aspiration hazard: | Not classified |
| Symptoms/injuries after inhalation: | EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis. |
| Symptoms/injuries after skin contact: | Dry skin. Symptoms/injuries after eye contact: Irritation of the eye tissue. |



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Symptoms/injuries after ingestion:

AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Body temperature fall. Slowing respiration.

Chronic symptoms:

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ecology - general:

Classification concerning the environment: not applicable.

Ecology - air:

TA-Luft Klasse 5.2.5.

Ecology - water:

Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l). Inhibition of activated sludge.

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LC50 fishes 1

4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system)

EC50 Daphnia 1

> 10000 mg/l (48 h; Daphnia magna)

LC50 fish 2

9640 mg/l (96 h; Pimephales promelas; Lethal)

EC50 Daphnia 2

13299 mg/l (48 h; Daphnia magna)

Threshold limit algae 1

> 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)

Threshold limit algae 2

1800 mg/l (72 h; Algae; Cell numbers)



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Persistence and degradability

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Persistence and degradability

Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available.

Biochemical oxygen demand (BOD)

1.19 g O²/g substance

Chemical oxygen demand (COD) 2.23 g O²/g substance

ThOD 2.40 g O²/g substance

BOD (% of ThOD) 0.49 % ThOD

Bio-accumulative Potential

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Log Pow 0.05 (Experimental value)

Bio-accumulative potential Low potential for bioaccumulation (Log Kow < 4).

Mobility in soil

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Surface tension 0.021 N/m (25 °C)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations:

Waste product and packaging must be disposed of in accordance with applicable local laws and regulations. Hazardous waste shall not be mixed together with other waste. Different types of



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hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation.

Section 14 TRANSPORT INFORMATION

In accordance with DOT

Transport document description: UN1219 Isopropanol, 3, II

UN-No.(DOT): 1219

DOT NA no.: UN1219

DOT Proper Shipping Name: Isopropanol

Department of Transportation (DOT) Hazard Classes: 3 - Class 3 - Flammable and combustible liquid
49 CFR 173.120

Hazard labels (DOT): 3 - Flammable liquid



Packing group (DOT): II - Medium Danger

DOT Special Provisions (49 CFR 172.102): IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum



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degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

**DOT Packaging Exceptions
(49 CFR 173.xxx):**

4b;150

**DOT Packaging Non Bulk
(49 CFR 173.xxx):**

202

**DOT Packaging Bulk
(49 CFR 173.xxx):**

242

DOT Quantity Limitations

Passenger aircraft/rail (49 CFR 173.27): 5 L

DOT Quantity Limitations

Cargo aircraft only (49 CFR 175.75): 60 L

DOT Vessel Stowage Location:

B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Additional Information

Other information:

No supplementary information available.

State during transport (ADR-RID):

as liquid.

ADR

Transport document description:

UN 1219 Isopropanol (isopropyl alcohol), 3, II, (D/E)



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| | |
|---|-----------------------|
| Packing group (ADR): | II |
| Class (ADR): | 3 - Flammable liquids |
| Hazard identification number (Kemler No.): | 33 |
| Classification code (ADR): | F1 |
| Tunnel restrictioncode: | D/E |
| Transport by sea | |
| UN-No. (IMDG): | 1219 |
| Class (IMDG): | 3 - Flammable liquids |
| EmS-No. (1): | F-E |
| EmS-No. (2): | S-D |
| Air transport | |
| UN-No.(IATA): | 1219 |
| Class (IATA): | 3 - Flammable Liquids |
| Packing group (IATA): | II - Medium Danger |

Section 15 REGULATORY INFORMATION

US Federal regulations

Isopropanol 70% v/v 67-63-0

Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)



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International Regulations

Canada

Isopropanol 70% v/v 67-63-0

WHMIS Classification Regulated

Section 16

OTHER INFORMATION: INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Notice: The information presented herein is based on data considered to be accurate as of the date of preparation of this safety data sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice a patented invention without a license. In addition, no responsibility can be assumed by the manufacturer or vendor for any damage or injury resulting from abnormal use, from failure to adhere to any recommended practices, from any hazards inherent in the nature of the product, or from any additions or changes in form or substance to the product as distributed by the manufacturer or vendor. It is the responsibility of the user to comply with all applicable laws and regulations.

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