



MATERIAL SAFETY DATA SHEET

1. Product And Company Identification

Product Name: CaviCide1™
Manufacturer: METREX™ RESEARCH
1717 W. Collins Ave.
Orange, CA 92867
U.S.A.
Imported by: Sybron Canada LP
Brampton, Ontario L6W 4T5

Information Phone Number: 1-800-841-1428 (Customer Service)

Chemical Emergency Phone Number (Chemical Spills, Leaks, Fire, Exposure or Accident only):
CHEMTREC 1-800-424-9300 (in the US) 1-703-527-3887 (Outside the US)

MSDS Date of Preparation/Revision: 7/14/2015
Product Use: Hard surface cleaner and disinfectant.
DIN: 02379732

2. Hazards Identification

Hazy to clear liquid with an alcohol odor.

EMERGENCY OVERVIEW

Flammable liquid and vapor. May cause eye irritation. May cause mild skin irritation. Inhalation of concentrated vapors may cause irritation of the eyes, nose and throat and dizziness and drowsiness. Prolonged overexposure to ethylene glycol monobutyl ether may affect liver, kidneys, blood, lymphatic system or central nervous system.

3. Composition/Information On Ingredients

Component	CAS No.	Amount
Isopropanol	67-63-0	15%
Ethanol	64-17-5	7.5%
Ethylene Glycol Monobutyl Ether (2-Butoxyethanol)	111-76-2	1-5%
Didecyldimethylammonium chloride	7173-51-5	0.76%
Water	7732-18-5	70-80%



4. First Aid Measures

Inhalation: Move to fresh air if effects occur and seek medical attention if effects persist.

Skin Contact: Remove contaminated clothing. Flush thoroughly with water for 15 minutes. If skin irritation or redness develops and persists, seek medical attention.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. Call a poison control center or doctor for treatment advice.

Ingestion: If swallowed, get medical advice by calling a Poison Control Center or hospital emergency room. If advice is not available, take victim and product container to the nearest emergency treatment center or hospital. Do not induce vomiting. Do not attempt to give anything by mouth to an unconscious person.

5. Fire Fighting Measures

Extinguishing Media: Use water spray or fog, alcohol-resistant foam, carbon dioxide or dry chemical. Cool fire exposed containers with water.

Special Fire Fighting Procedures: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

Unusual Fire Hazards: Flammable liquid and vapor. May form explosive mixtures in air at temperatures at or above the flashpoint. Flammable vapors may collect in confined areas. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flashback. Fire exposed containers may rupture explosively.

Hazardous Combustion Products: Burning may produce carbon monoxide, carbon dioxide, ammonia, chlorine and hydrogen chloride.

6: Accidental Release Measures

Eliminate all ignition sources. Ventilate area. Use explosion-proof equipment if large amounts are released. Stop leak if it is safe to do so and move containers from the spill area. Wear appropriate protective clothing and equipment (See Section 8). Collect material with an inert absorbent material and place in appropriate, labeled container for disposal. Refer to Section 13 for disposal advice.

7. Handling and Storage

Avoid contact with eyes and clothing. Wear appropriate eye protection when handling (see Section 8). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.



Flammable liquid and vapor. Keep away from heat, sparks, open flames and all other sources of ignition. Do not smoke in storage or use areas. Keep containers closed when not in use. Do not reuse empty containers.

Store in a cool, well ventilated area away from heat, oxidizers and all sources of ignition. Empty containers retain product residues and may be hazardous. Do not flame cut, drill, weld, etc. on or near empty containers, even empty.

8. Exposure Controls / Personal Protection

Exposure Limits

Chemical	Exposure Limit
Isopropanol	200 ppm TWA, 400 ppm STEL (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Labrador, Nova Scotia, Prince Edward Island, Saskatchewan, Ontario 400 ppm TWA, 500 ppm STEL skin Nunavut, Northwest Territories, Yukon, Quebec
Ethanol	1000 ppm STEL (British Columbia, Manitoba, Newfoundland, Labrador, Nova Scotia, Prince Edward Island, Ontario 1000 ppm TWA (Alberta, New Brunswick, Quebec 1000 ppm TWA, 1250 STEL Nunavut, Northwest Territories, Saskatchewan 1000 ppm TWA/STEL Yukon
Ethylene Glycol Monobutyl Ether (2-Butoxyethanol)	20 ppm TWA (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Labrador, Nova Scotia, Prince Edward Island, Ontario, Quebec 20 ppm TWA, 30 ppm STEL Saskatchewan 25 ppm TWA, 75 ppm STEL Nunavut, Northwest Territories 50 ppm TWA, 150 ppm STEL skin Yukon
Didecyldimethylammonium chloride	None Established

Ventilation: General ventilation should be adequate for normal use. For operations where the exposure limits may be exceeded, mechanical ventilation such as local exhaust may be needed to minimize exposure.

Respiratory Protection: None under normal use conditions with adequate ventilation. For operations where the occupational exposure limits are exceeded, a NIOSH/MSHA approved respirator with an organic vapor cartridges or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Gloves: Impervious gloves such as butyl rubber or nitrile are recommended for operations which may result in prolonged or repeated skin contact.



Eye Protection: Splash proof goggles, face shield, or safety glasses are recommended to prevent eye contact.

Other Protective Equipment/Clothing: Wear protective clothing if needed to avoid prolonged/repeated skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered before re-use.

9. Physical and Chemical Properties

Appearance And Odor: Hazy to clear liquid with an alcohol odor.

Boiling Point:	Not Determined	Specific Gravity:	0.964
Solubility in Water:	Complete	pH:	11.0 -12.49
Vapor Pressure:	19 kPa @ 20°C (ethanol)	Vapor Density:	5.87 (ethanol)
Percent Volatile:	>95%	Melting/Freezing Point:	Not Determined
Coefficient of Water/Oil Distribution:	Not Determined		
Flash Point:	34.4°C (93.4°F)	Flammable Limits:	LEL: 2.5% UEL: 19%

10. Stability and Reactivity

Stability: Stable

Conditions To Avoid: Heat, sparks, flames and all other sources of ignition.

Incompatibility: Strong oxidizing agents, acids and strong alkalis.

Hazardous Decomposition Products: Thermal decomposition will produce carbon monoxide, carbon dioxide, ammonia, chlorine and hydrogen chloride.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Potential Health Effects:

Acute Hazards:

Inhalation: May cause irritation of the nose, throat and upper respiratory tract. High vapor concentrations may produce nausea, vomiting, headache, dizziness, drowsiness, weakness, fatigue, narcosis and possible unconsciousness. Not acutely toxic in rats.

Skin Contact: Prolonged or repeated exposure may cause mild irritation. No signs of toxicity or irritation were observed in a dermal toxicity study in rats. Slightly irritating in a primary irritation study with rabbits. Negative in a skin sensitization study with guinea pigs.

Eye Contact: May cause irritation with tearing, redness and pain. Moderate irritant in an eye irritation study with rabbits. Effects reversed in 10 days.



Ingestion: Ingestion may cause gastrointestinal disturbances and central nervous system effects such as headache, dizziness, drowsiness and nausea. Not acutely toxic in rats.

Chronic Hazards: Prolonged overexposure to ethylene glycol monobutyl ether may affect liver, kidneys, blood, lymphatic system or central nervous system. Prolonged or repeated exposure to ethanol may cause liver and kidney effects. Consumption of ethyl alcohol during pregnancy may cause mental retardation and other birth defects.

Medical Conditions Aggravated By Exposure: Due to its defatting properties, isopropyl alcohol may aggravate an existing skin condition. Ingestion of ethyl alcohol may aggravate an existing liver condition.

Carcinogen: None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

Acute Toxicity Values for CaviCide1:

LD50 Oral Rat >5050 mg/kg

LD50 Dermal Rat >5000 mg/kg

LC50 inhalation LC50 rat >2.16 mg/L

12. Ecological Information

This product is classified as Acute and Chronic Aquatic Toxicity Category 3 based on the GHS criteria for aquatic toxicity. Harmful to aquatic life with long lasting effects.

Toxicity:

Ethanol: LC50 rainbow trout 13000 mg/L/96 hr; LC50 daphnia magna 9268-14221 mg/L/48 hr; EC50 Chlorella pyrenoidosa (Green algae; growth inhibition) 9310 mg/L/48 hr

Isopropanol: LC50 fathead minnows 11,130 mg/L/48 hr; LC50 brown shrimp 1400 mg/L/48 hr

Didecyldimethylammonium chloride: LC50 bluegill sunfish 0.32 mg/L/96 hr, EC50 daphnia magna 0.94 mg/L/48 hr.

Persistence and degradability: Ethanol, isopropanol and didecyldimethylammonium chloride are readily biodegradable in screening tests.

Bioaccumulative Potential: Ethanol and isopropanol have an estimated BCF of 3 suggesting that the potential for bioaccumulation is low. A BCF of 81 for didecyldimethylammonium chloride suggests bioconcentration in aquatic organisms is moderate.

Mobility in Soil: Ethanol and isopropanol are expected to have very high mobility in soil. If released to soil, didecyldimethylammonium chloride is expected to have no mobility based upon Koc values greater than 4.4×10^5 .



13. Disposal Considerations

Do not contaminate water, food, or feed by storage and disposal.

Solution Disposal: Dilute with water. Dispose in accordance with local regulations.

Container Disposal: Triple rinse. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by provincial and local authorities, by burning. If burned, keep out of smoke.

14. Transport Information

U.S. DOT Hazard Classification

Proper Shipping Name: Not Regulated per alcohol exception (49CFR 173.150(e))

Technical Name: N/A

UN Number: N/A

Hazard Class/Packing Group: N/A

Labels Required: N/A

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

Canada TDG

Proper Shipping Name: Not Regulated per aqueous solution of alcohol exception (1.36)

Technical Name: N/A

UN Number: N/A

Hazard Class/Packing Group: N/A

Labels Required: N/A

IMDG Code Shipping Classification

Proper Shipping Name: Alcohols, n.o.s. (Isopropanol, ethanol)

UN Number: UN1987

Hazard Class: 3

Packing Group: III

Labels Required: Flammable Liquid (Class 3)

Placards Required: Class 3

Not classified as a marine pollutant

ICAO Air Transport Classification

Proper Shipping Name: Alcohols, n.o.s. (Isopropanol, ethanol)

ID Number: UN1987

Hazard Class: 3

Packing Group: III

Labels Required: Class 3



15. Regulatory Information

National Pollutant Release Inventory (NPRI): This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements NPRI:

Isopropanol	15%
Ethanol	7.5%
Ethylene Glycol Monobutyl Ether	1-5%

CEPA Chemical Inventory: All of the components of this material are listed on the DSL or exempt.

WHMIS Classification: Class B-2, Class D-2-B

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

16. Other Information

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

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, METREX™ RESEARCH makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.