

SAFETY DATA SHEET

Section 1. Product And Company Identification

Product Name: CaviCide1™
Product Use: Hard surface cleaner and disinfectant

Manufacturer: METREX® RESEARCH
1717 W. Collins Ave.
Orange, CA 92867
U.S.A.

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)

SDS Date of Preparation/Revision: 4/16/18

Section 2. Hazards Identification

GHS / HAZCOM 2012 Classification:

Flammable Liquid Category 3
Eye Irritation Category 2A

Warning!



Hazard Phrases

Flammable liquid and vapor.
Causes serious eye irritation.

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Use explosion-proof electrical, ventilating and light equipment.
Use non-sparking tools.
Take action to prevent static discharge.
Wash thoroughly after handling.
Wear protective gloves and eye protection.

Response:

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.
In case of fire: Use water spray or fog, alcohol-resistant foam, carbon dioxide or dry chemical to extinguish.



Storage

Store in a well ventilated place. Keep cool.

Disposal

Dispose of contents and container in accordance with local and national regulations.

Other hazards: None

Section 3. Composition/Information on Ingredients

Component	CAS No.	Amount
Water	7732-18-5	70-80%
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%

Section 4. First Aid Measures

Inhalation: Move to fresh air. If symptoms of exposure develop and persist, get medical attention.

Skin Contact: Wash skin with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before re-use.

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: Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.

Most Important symptoms and effects, both acute and delayed: Causes eye irritation. Prolonged skin contact may cause irritation. Inhalation of concentrated vapors may cause dizziness and drowsiness. Ingestion may cause may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed: Immediate medical attention is not required.

Section 5. Fire Fighting Measures

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

Specific Hazards Arising from the Chemical: 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. Combustion may produce carbon monoxide, carbon dioxide, nitrogen oxides, amines, chlorine and hydrogen chloride.

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

Section 6: Accidental Release Measures

Personal precautions, Protective equipment, and Emergency procedures: Avoid contact with eyes. Avoid prolonged contact with skin and clothing. Wear appropriate protective clothing as described in Section 8. Ventilate the area.

Environmental Precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

Methods and Materials for Containment and Cleaning up: 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. Collect material with an inert absorbent material and place in appropriate, labeled container for disposal.

Section 7. Handling and Storage

Precautions for Safe Handling: Avoid contact with the eyes. Avoid prolonged contact with skin and clothing. Use with adequate ventilation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. 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.

Empty containers retain product residues and may be hazardous. Do not flame cut, drill, weld, etc. on or near empty containers, even empty.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well ventilated area away from heat, oxidizers and all sources of ignition.

Section 8. Exposure Controls / Personal Protection

Exposure Limits

Chemical	Exposure Limit
Water	None Established
Isopropanol	200 ppm TWA, 400 ppm STEL ACGIH TLV 400 ppm TWA OSHA PEL
Ethanol	1000 ppm STEL ACGIH TLV 1000 ppm TWA OSHA PEL
Ethylene Glycol Monobutyl Ether (2-Butoxyethanol)	20 ppm TWA ACGIH TLV 50 ppm TWA OSHA PEL (skin)
Didecyldimethylammonium chloride	None Established



Appropriate Engineering Controls: 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. Use explosion proof electrical equipment and wiring where required.

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

Hand protection: Impervious gloves such as butyl rubber or nitrile may be used to avoid prolonged skin contact.

Eye Protection: Splash proof goggles, face shield, or safety glasses are recommended if splashing is possible.

Skin Protection: Wear protective clothing if needed to avoid prolonged skin contact. Contaminated clothing should be removed and laundered before re-use.

Hygiene measures: Suitable eye wash and washing facilities should be available in the work area.

Other: None required under normal conditions of use.

Section 9. Physical and Chemical Properties

Appearance:	Hazy to clear liquid	Odor:	Alcohol
Odor Threshold:	0.001 ppm (ethylene glycol monobutyl ether)	pH:	11.0-12.49
Melting/Freezing Point:	Not determined	Boiling Point/Range:	Not determined
Flash Point:	34.4°C (93.4°F)	Evaporation Rate:	Not determined
Flammability: (Solid, Gas)	Not applicable	Flammability Limits:	LEL: 2.5% UEL: 19%
Vapor Pressure:	19 kPa @ 20°C (ethanol)	Vapor Density:	5.87 (ethanol)
Relative Density:	0.964	Solubilities:	Completely soluble in water
Partition Coefficient: (N-Octanol/Water)	Not determined	Autoignition Temperature:	Not determined
Decomposition Temperature:	Not determined	Viscosity:	Not determined

Section 10. Stability and Reactivity

Reactivity: Not reactive at ambient temperatures.

Chemical Stability: Stable.

Possibility of Hazardous Reactions: Not reactive.

Conditions to avoid: Heat, sparks, flames and all other sources of ignition.

Incompatible Materials: Strong oxidizing agents, acids and strong reducing agents.



Hazardous decomposition products: Thermal decomposition will produce carbon monoxide, carbon dioxide, nitrogen oxides, amines, chlorine and hydrogen chloride.

Section 11. Toxicological Information

Potential Health Effects:

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: None currently known.

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

Acute Toxicity Values for CaviCide 1:

LD50 Oral Rat >5050 mg/kg, LD50 Dermal Rat >5000 mg/kg, LC50 inhalation LC50 rat >2.16 mg/L

Section 12. Ecological Information

This product is classified as Acute Aquatic Toxicity Category 3 based on the GHS criteria for aquatic toxicity. Harmful to aquatic life.

Toxicity: No toxicity data available for product.

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 in soil.

Other Adverse Effects: None known

Section 13. Disposal Considerations

Solution Disposal: Discharge residual and unused solutions in accordance with Federal, State, and local regulations. For used solution, the waste solution must be characterized by the generator and disposed of in accordance with Federal, State, and local regulations.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. If recycling is not available, discard in accordance with hospital policy.

Section 14. Transport Information

	UN Number	UN Proper Shipping Name	Hazard Class(s)	Packing Group	Environmental Hazards
US DOT	None	Not Regulated per alcohol exception (49CFR 173.150(e))	None	None	None
EU ADR/RID	UN1987	Alcohols, n.o.s. (Isopropanol, ethanol)	3	III	None
IMDG	UN1987	Alcohols, n.o.s. (Isopropanol, ethanol)	3	III	None
IATA/ICAO	UN1987	Alcohols, n.o.s. (Isopropanol, ethanol)	3	III	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None identified

Section 15. Regulatory Information

U.S. Federal Regulations:

EPA SARA 311/312 Hazard Classification: Refer to Section 2 for OSHA Hazard Classification.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol Monobutyl Ether (Glycol Ether)	111-76-2	1-5%
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Protection of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.



CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product does not contain chemicals regulated under California Proposition 65.

US EPA Registered Pesticide: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

WARNING!

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear goggles, face shield, or safety glasses. 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.

Keep out of reach of children,

Combustible. Do not use or store near heat or open flame.

International Inventories

US EPA TSCA Inventory: All of the components of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or exempt.

Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL) or exempt.

Australia: All of the components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or exempt.

China: All of the components in this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or exempt.

European Union: All the components in this product are listed on the EINECS inventory or exempt.

Japan: All of the components in this product are listed on the Japanese Existing and New Chemical Substances (ENCS) inventory or exempt.

Korea: All of the components in this product are listed on the Korean Existing Chemicals List (KECL) or exempt.

New Zealand: All of the components in this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempt.

Philippines: All of the components of this product are listed on the Philippines Inventory of Chemicals



and Chemical Substances (PICCS) or exempt.

Taiwan: All of the components of this product are listed on the National Existing Chemical Inventory (NECI) in Taiwan or exempt.

Section 16. Other Information

Effective Date: April 16, 2018

Supersedes Date: March 23, 2016

Revision Summary: All sections. Converted to GHS format

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