SAFETY DATA SHEET

Section 1. Product And Company Identification

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

Manufacturer: METREX™ RESEARCH
28210 Wick Rd
Romulus, MI 48174
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: 3/23/16

Section 2. Hazards Identification

GHS / HAZCOM 2012 Classification:
Flammable Liquid Category 3
Eye Irritation Category 2A
Specific Target Organ Toxicity Single Exposure Category 3 (Narcotic effects)

Warning!

Hazard Phrases
Flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Prevention:
Keep away from heat, sparks, open flames, hot surfaces – No smoking.
Keep container tightly closed.
Use explosion-proof electrical, ventilating and light equipment.
Take precautionary measures against static discharge.
Avoid breathing vapors.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection.

Response:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or physician if you feel unwell.
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	17.2%
Ethylene Glycol Monobutyl Ether (2-Butoxyethanol)	111-76-2	1-5%
Diisobutylphenoxyethoxyethyldimethylbenzyl ammonium chloride	121-54-0	0.28%

Section 4. First Aid Measures

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

Skin Contact: Remove contaminated clothing. Wash all affected and exposed areas with soap and water. 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, 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 attempt to give anything by mouth to an unconscious person.

Most Important symptoms and effects, both acute and delayed: Causes serious eye irritation. Inhalation of concentrated vapors may cause irritation of the eyes, nose and throat and dizziness and drowsiness.

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

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: Wear appropriate protective clothing and equipment.

Environmental Precautions: Avoid release to the environment.

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: Do not get in eyes or on clothing. Wear appropriate eye protection when handling. 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.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well ventilated area away from heat, oxidizers and all sources of ignition. Do not contaminate water, food or feed by storage.

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

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
Ethylene Glycol Monobutyl Ether (2-Butoxyethanol)	20 ppm TWA ACGIH TLV 50 ppm TWA OSHA PEL (skin)
Diisobutylphenoxyethoxyethyldimethyl benzylammonium 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 to minimize exposure. 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 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.

Skin Protection: Wear protective clothing if needed to avoid prolonged/ repeated 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.

Section 9. Physical and Chemical Properties

Appearance:	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:	28.3°C (83°F)	**Evaporation Rate:**	Not determined
Flammability: (Solid, Gas)	Not applicable	**Flammability Limits:**	LEL: 2% UEL: 12.7%
Vapor Pressure:	43.3 mmHg @ 20°C (isopropanol)	**Vapor Density:**	2.1 (isopropanol)
Relative Density:	0.972	**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 rabbits. Non-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 7 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.

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:
LD50 Oral Rat >5000 mg/kg, LD50 Dermal Rat >2000 mg/kg, LC50 inhalation LC50 rat >2.08 mg/L

Section 12. Ecological Information

This product is not classified as aquatically toxic based on the GHS criteria for aquatic toxicity.

Toxicity: No toxicity data available for product.
Isopropanol: LC50 fathead minnows 11,130 mg/L/48 hr; LC50 brown shrimp 1400 mg/L/48 hr
Diisobutylphenoxyethoxyethyldimethylbenzylammonium chloride: LC50 pimephales promelas 1.6 mg/L/96 hr, LC50 lepomis macrochirus 1.4 mg/L/96 hr.

Persistence and degradability: Isopropanol and 2-butoxyethanol are readily biodegradable in screening tests. Diisobutylphenoxyethoxyethyldimethylbenzylammonium chloride is not readily biodegradable.

Bioaccumulative Potential: Isopropanol has an estimated BCF of 3 suggesting that the potential for bioaccumulation is low.

Mobility in Soil: Isopropanol is expected to have very high 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)	3	III	None
IMDG	UN1987	Alcohols, n.o.s. (Isopropanol)	3	III	None
IATA/ICAO	UN1987	Alcohols, n.o.s. (Isopropanol)	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: Fire Hazard, Acute Health, Chronic Health

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%

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.

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.

CAUTION!
Harmful if absorbed through the skin.
Causes moderate eye irritation.
Keep out of reach of children.

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.

Philippines: All of the components of this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or exempt.

Section 16. Other Information

Effective Date: March 23, 2016

Supersedes Date: June 1, 2015

Revision Summary: Removed prop 65 notice per exposure assessment.

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