



MATERIAL SAFETY DATA SHEET

1. Product And Company Identification

Product Name: MetriCide® 28

Manufacturer: METREX® RESEARCH
28210 Wick Road
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)

MSDS Date of Preparation/Revision: 11/1/2012

Product Use: Liquid Sterilant/High Level Disinfectant

2. Hazards Identification

Clear, colorless liquid with a fruity odor.

EMERGENCY OVERVIEW

Corrosive to eyes. May cause skin and respiratory tract irritation. May be harmful if swallowed or inhaled. Ingestion of glutaraldehyde may cause nervous system effects including nausea, dizziness, headache, and drowsiness. Repeated inhalation of vapors may cause asthmatic symptoms in some individuals.

3. Composition/Information On Ingredients

Component	CAS No.	Amount
Glutaraldehyde	111-30-8	2.5%
Non-Hazardous Ingredients	Proprietary	97.5%

4. First Aid Measures

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

Skin Contact: Flush with water for 15 minutes. If skin irritation develops and persists, seek medical attention.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Seek immediate medical attention.

Ingestion: If swallowed, get immediate 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 unless directed to do so by medical personnel. If the victim is alert, rinse their mouth with water. Do not attempt to give anything by mouth to an unconscious person.

Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.



5. Fire Fighting Measures

Extinguishing Media: Use any media that is suitable for the surrounding fire.

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: None known.

Hazardous Combustion Products: Burning, after the water has evaporated, may produce carbon monoxide and carbon dioxide.

6: Accidental Release Measures

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 breathing vapors or mists. Prevent contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Avoid contamination of food. Use in a well-ventilated area in closed containers. Use in accordance with label directions.

Store at room temperature. Keep containers closed.

8. Exposure Controls / Personal Protection

Exposure Limits

Chemical	Exposure Limit
Glutaraldehyde	0.05 ppm Ceiling ACGIH TLV (SEN)

Ventilation: Use general or local exhaust ventilation as needed to maintain airborne concentrations below the occupational exposure limits.

Respiratory Protection: None under normal use conditions with adequate ventilation. For operations where exposure limits are exceeded, a NIOSH approved respirator with an organic vapor cartridge 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: Protective gloves such as butyl rubber or nitrile are recommended.

Eye Protection: Safety goggles recommended.

Other Protective Equipment/Clothing: Wear protective clothing as needed to avoid skin contact.



9. Physical and Chemical Properties

Appearance and Odor: Clear, colorless liquid with a fruity odor.

Boiling Point:	100°C (212°F)	Specific Gravity:	>1.0
Solubility in Water:	Soluble	pH:	3.2-4.3 unactivated, 6.5-8.5 activated
Vapor Pressure:	0.3 mmHg @20°C (glutaraldehyde)	Vapor Density:	1.1 (glutaraldehyde)
Percent Volatile:	100%	Melting/Freezing Point:	Not Determined
Coefficient of Water/Oil Distribution:	Not Determined		
Flash Point:	None	Flammable Limits:	None

10. Stability and Reactivity

Stability: Stable

Conditions to Avoid: Avoid temperatures above 100°C. Do not allow significant evaporation.

Incompatibility: Strong oxidizing agents and acids and bases.

Hazardous Decomposition Products: Thermal decomposition will produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Potential Health Effects:

Acute Hazards:

Inhalation: Vapors may cause irritation of the nose, throat and upper respiratory tract. Repeated inhalation of glutaraldehyde vapors may cause asthmatic symptoms in some individuals, including cough, wheezing and difficulty breathing.

Skin Contact: May cause skin irritation. No signs of toxicity were observed in a dermal toxicity study in rabbits. Irritating in a primary irritation study with rabbits, effects reversed in 72 hrs. Negative in a skin sensitization study with guinea pigs.

Eye Contact: Causes severe irritation and possible eye damage. Corrosive in an eye irritation study in rabbits.

Ingestion: Do not ingest. If swallowed, may irritate mouth, throat and intestinal tract. Ingestion of glutaraldehyde may cause nervous system effects including nausea, dizziness, headache, and drowsiness.

Chronic Hazards: No adverse effects expected based on the available data.

Medical Conditions Aggravated By Exposure: None known.



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

Acute Toxicity Values for MetriCide:

LD50 Oral Rat 3450 mg/kg
LD50 Dermal Rabbit >2000 mg/kg

12. Ecological Information

This product is classified as toxic to the aquatic environment.

Toxicity:

Glutaraldehyde: LC50 fathead minnow 10.8 mg/L/96 hr; EC50 daphnia magna 0.69 mg/L/48 hr; EbC50 green algae 2.64 mg/L/72 hr.

Persistence and degradability: Glutaraldehyde is readily biodegradable.

Bioaccumulative Potential: Glutaraldehyde: log Kow -0.333, potential for bioaccumulation is low.

Mobility in Soil: Glutaraldehyde: highly mobile in soil.

13. Disposal Considerations

Dispose in accordance with national, state/provincial and local regulations. Refer to product label for disposal information.

14. Transport Information

U.S. DOT Hazard Classification

Proper Shipping Name: Not Regulated
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.

IMDG Code Shipping Classification

Proper Shipping Name: Not Regulated
UN Number: None
Hazard Class: None
Packing Group: None
Labels Required: None
Placards Required: None
Not classified as a marine pollutant



ICAO Air Transport Classification

Proper Shipping Name: Not Regulated

ID Number: None

Hazard Class: None

Packing Group: None

Labels Required: None

15. Regulatory Information

EPA SARA 311/312 Hazard Classification: 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): None

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 release reporting under CERCLA. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

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

16. Other Information

NFPA Rating: Fire: 0

Health: 3

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.