



SAFETY DATA SHEET



MultiMicro™ Concentrate

DM20072 Rev.B

Prepared to U.S. OSHA, ANSI, & Canadian WHMIS Standards

SECTION 1. PRODUCT IDENTIFICATION

1.1 TRADE NAME (AS LABELED):

MultiMicro™ Concentrate

SYNONYMS:

None

CAS#:

Mixture

1.2 PRODUCT USE:

Antimicrobial

CHEMICAL SHIPPING NAME/CLASS:

Non-Regulated Material

U.N. NUMBER:

None

1.3 NORTH AMERICA:

MANUFACTURER'S NAME:

Tennant Company

ADDRESS:

701 North Lilac Drive, P.O. Box 1452, Minneapolis, MN 55440-1452

BUSINESS PHONE:

1-763-540-1200

EMAIL:

info@tennantco.com

WEB SITE INFORMATION:

www.orbio.com

1.4 EMERGENCY PHONE NUMBERS:

1-800-424-9300 (CHEMTREC – 24 Hrs)

DATE OF CURRENT REVISION:

December 5, 2014

DATE OF LAST REVISION:

New

SECTION 2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is regulated by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. This product is a clear colorless liquid with a slight chlorine odor.

Health Hazards: Under normal conditions of intended use this material does not pose a risk to health. This product has been classified by independent testing to be practically non-irritating to eyes and non-irritating to skin. Prolonged skin contact may cause irritation. Avoid breathing spray mist.

Flammability Hazards: This product is a Non-Flammable liquid.

Reactivity Hazards: None known

Environmental Hazards: The Environmental effects of this product have not been investigated. Release of this product is not anticipated to have adverse effects in the aquatic environment.

US EPA SIGNAL WORD:

CAUTION!

CANADA (WHMIS) SYMBOL(S)

“Not Controlled”

GHS Hazard Symbol(s)

None

Signal Word: **NONE**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

This chemical is regulated 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.

2.1 GHS LABELING AND HAZARD CLASSIFICATION:

This product does not meet the definition of a hazardous substance or preparation as defined by the OSHA and described in 29 CFR 1910.1200(d)

Component(s) Contributing to Classification(s)

None

2.2 LABEL ELEMENTS

GHS Hazard Classification(s):

None

Hazard Statement(s):

None

Precautionary Statement(s):

None



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2.3 HEALTH HAZARDS OR RISKS FROM EXPOSURE:

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

ACUTE:

INHALATION: Under normal conditions of intended use, this material is not expected to be an inhalation hazard. Avoid breathing spray mist.

CONTACT WITH SKIN: Under normal conditions of intended use, this material is not expected to be a skin hazard. In an independent study per U.S. EPA Guidelines OPPTS 870.2500 this product has been classified as non-irritating to the skin. Prolonged exposure may cause possible skin irritation.

EYE CONTACT: Contact with eyes is not expected to cause irritation. In an independent study per U.S. EPA Guidelines OPPTS 870.2400 this product has been classified as practically non-irritating to the eyes.

INGESTION: Under normal conditions of intended use, this material is not expected to be an ingestion hazard. Ingestion of large quantities may cause gastrointestinal irritation.

CHRONIC: None known

TARGET ORGANS: Acute: Skin, Eyes

Chronic: None known

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

COMPOSITION	WT. PERCENTAGE	CAS#	HAZARD CLASSIFICATION
Water	99.85%	7732-18-5	None
Hypochlorous Acid	0.15%	7790-92-3	[Xi] Irritant
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).			

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

EYE CONTACT: If product enters the eyes, hold eyes open and rinse slowly with water for 15 - 20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

INGESTION: If this product is swallowed, call physician or poison control center for treatment advice. Do not induce vomiting unless told to do so by a poison control center or physician. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. If transporting take a copy of the label and/or SDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known

4.2 SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Prolonged skin exposure may cause mild irritation.

4.3 RECOMMENDATIONS TO PHYSICIANS:

Treat symptoms and eliminate overexposure.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 FIRE EXTINGUISHING MATERIALS:

Use fire extinguishing methods below:

<u>Water Spray:</u> Yes	<u>Carbon Dioxide:</u> Yes
<u>Foam:</u> Yes	<u>Dry Chemical:</u> Yes
<u>Halon:</u> Yes	<u>Other:</u> Any "C" Class

5.2 UNUSUAL FIRE AND EXPLOSION HAZARDS:

Not considered a fire or explosion hazard.

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No



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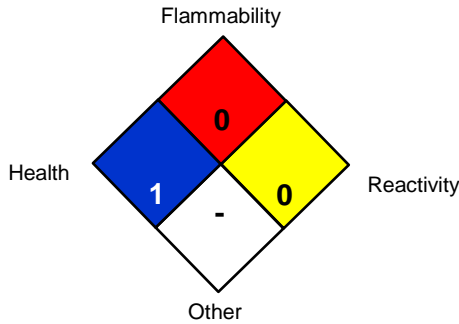


FLASH POINT: Non-Flammable
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Lower NA Upper NA

5.3 SPECIAL FIRE-FIGHTING PROCEDURES:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM	
HEALTH HAZARD (BLUE)	1
FLAMMABILITY HAZARD (RED)	0
PHYSICAL HAZARD (YELLOW)	0
PROTECTIVE EQUIPMENT	
EYES	RESPIRATORY
RESPIRATORY	HANDS
HANDS	BODY
	See Sect 8
	See Sect 8

For Routine Industrial Use and Handling Applications

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

See Section 8.2 for Exposure Controls.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep spilled material out of all sewers and open bodies of water.

6.3 SPILL AND LEAK RESPONSE:

Stop the flow of material, if this can be done safely. Contain discharged material. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Place in a proper container for disposal. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada. (see Section 13, Disposal Considerations).

SECTION 7. HANDLING and STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Use good hygiene practices.

7.2 STORAGE AND HANDLING PRACTICES:

Store in original container. Store in sealed containers to maintain efficacy of solution. See technical bulletin for specific container storage information.

7.3 SPECIFIC USES:

Various uses

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 EXPOSURE PARAMETERS:

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
Hypochlorous Acid	7790-92-3	Not Listed	Not Listed



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8.2 EXPOSURE CONTROLS:

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada.

RESPIRATORY PROTECTION: Not required when using this product. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93.

EYE PROTECTION: Safety glasses or goggles are recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Standards of Canada.

HAND PROTECTION: Chemical resistant gloves are recommended to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Not normally required when using this product. If necessary, refer to appropriate Standards of Canada, or appropriate U.S. OSHA Standards described in 29 CFR 1910.136.

SECTION 9. PHYSICAL and CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE (Physical State) and COLOR: Clear colorless liquid with a slight chlorine odor

ODOR: Slight chlorine odor

ODOR THRESHOLD: Not Applicable

pH: 5 – 6

MELTING/FREEZING POINT: 32°F (0°C)

BOILING POINT: 212°F (100°C)

FLASH POINT: Not Applicable

EVAPORATION RATE (n-BuAc=1): Not Available

FLAMMABILITY (SOLID, GAS): Not Applicable

UPPER/LOWER FLAMMABILITY OR EXPLOSION LIMITS: Not Applicable

VAPOR PRESSURE (mm Hg @ 20°C (68°F): Not Available

VAPOR DENSITY: Not Available

RELATIVE DENSITY: Not Available

SPECIFIC GRAVITY: Not Available

SOLUBILITY IN WATER: Completely Soluble

WEIGHT PER GALLON: Not Available

PARTITION COEFFICIENT (n-octanol/water): Not Available

AUTO-IGNITION TEMPERATURE: Not Applicable

DECOMPOSITION TEMPERATURE: Not Available

VISCOSITY: 0.001 Pa s @ 20°C

9.2 OTHER INFORMATION:

No additional information available

SECTION 10. STABILITY and REACTIVITY

10.1 REACTIVITY:

This product is a strong oxidizer. Do not mix with ammonia or acid which will produce chlorine gas.

10.2 STABILITY:

Stable under conditions of normal storage and use.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:

Will not occur.

10.4 CONDITIONS TO AVOID:

Avoid freezing and excessive temperatures.

10.5 MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:

None known

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition products include oxides of carbon.



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SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

TOXICITY DATA:

Hypochlorous Acid CAS# 7790-92-3

No LD 50 Data Available

SUSPECTED CANCER AGENT: Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: In an independent study per U.S. EPA Guidelines OPPTS 870.2400 and OPPTS 870.2500 this product has been classified in a single exposure as practically non-irritating to the eyes and non-irritating to skin.

SENSITIZATION TO THE PRODUCT: This product is not a skin and respiratory sensitizer

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

SECTION 12. ECOLOGICAL INFORMATION

12.1 TOXICITY:

No toxicity data available

12.2 PERSISTENCE AND DEGRADABILITY:

No specific data available on this product.

12.3 BIOACCUMULATIVE POTENTIAL:

No specific data available on this product.

12.4 MOBILITY IN SOIL:

No specific data available on this product.

12.5 OTHER ADVERSE EFFECTS:

This product is not expected to be harmful to plants, animals or aquatic life.

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:

Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, and those of Canada.

SECTION 14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS: This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

14.1 UN IDENTIFICATION NUMBER:

None

14.2

PROPER SHIPPING NAME:

Non-Regulated Material

14.3 HAZARD CLASS NUMBER and DESCRIPTION:

None

14.4 PACKING GROUP:

NA

DOT LABEL(S) REQUIRED:

None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER: None

14.5 ENVIRONMENTAL HAZARDS: (RQ QUANTITY)

None

MARINE POLLUTANT: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.6 SPECIAL PRECAUTION FOR USER:

None

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is not considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not considered as dangerous goods.



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SECTION 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE SUBSTANCE OR MIXTURE: UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Hypochlorous Acid, CAS# 7790-92-3, 1,000 Lbs RQ

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory or are exempted from listing.

OTHER U.S. FEDERAL REGULATIONS: This chemical is regulated 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.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Ingredients within this product are not on the Proposition 65 Lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The components of this product are on the DSL Inventory, or are exempted from listing.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

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

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is "Not Controlled", per WHMIS Controlled Product Regulations

SECTION 16. OTHER INFORMATION

ABBREVIATIONS AND ACRONYMS:

EPA: United States Environmental Protection Agency

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PREPARED BY: Paul Eigbrett – (**GHS MSDS Compliance PLUS**)

DATE OF PRINTING: March 25, 2014

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Tennant Company assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Tennant Company assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

END OF SDS SHEET