



SAFETY DATA SHEET



MultiMicro Concentrate

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Directives

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	MultiMicro Concentrate
SYNONYMS:	None
CAS#:	Mixture
PRODUCT USE:	Antimicrobial Product
CHEMICAL SHIPPING NAME/CLASS:	Non-Regulated Material
U.N. NUMBER:	None
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
EUROPE:	
MANUFACTURER'S NAME:	Tennant Benelux N.V.
ADDRESS:	Plantin & Moretuslie 220, B2018 Antwerpen
BUSINESS PHONE:	00800-225-836
EMERGENCY PHONE NUMBERS:	1-800-424-9300 (ChemTrec U.S. – 24Hrs) 1-613-996-6666 (Canada CANUTEC – 24 Hrs) 00-1-703-527-3887 (Chemtrec Europe English – 24 Hrs) +33 (0)975181407 (France) 0800-181-7059 (Germany) 800-789-767 (Italy) 01-800-681-9531 (Mexico) +31 (0)858880596 (Netherlands) 900-868538 (Spain) +46 (0)852503403 (Sweden) +351 308801773 (Portugal) +44 (0)870-8200418 (U.K.) +32 (0)28083237 (Belgium)
EMAIL:	info@tennantco.com
WEB SITE INFORMATION:	www.orbio.com
DATE OF CURRENT REVISION:	November 18, 2013
DATE OF LAST REVISION:	New

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a clear colorless liquid with a chlorine odor.

Health Hazards: Under normal conditions of intended use this material does not pose a risk to health. Eye contact or prolonged skin contact may cause irritation.

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 DOT SYMBOL(S)

CANADA (WHMIS) SYMBOL(S)

EUROPEAN and (GHS) Hazard Symbol(s)

Non-Regulated Material

“Not Controlled”



Signal Word: **Warning!**



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EU LABELING AND CLASSIFICATION:

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

Index Number:

EC# 231-791-2 This substance is not classified in the Annex I of Directive 67/548/EEC

EC# 232-232-5 This substance is not classified in the Annex I of Directive 67/548/EEC

Substances not listed either individually or in group entries must be self classified.

Component(s) Contributing to Classification(s)

Hypochlorous Acid

GHS Hazard Classification(s):

Skin Irritant Category 2

Eye Irritant Category 2B

Hazard Statement(s):

H315: Causes skin irritation

H320: Causes eye irritation

Precautionary Statement(s):

P264: Wash hands thoroughly after handling

P281: Use personal protective equipment as required

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1999/45/EC:

[Xi] Irritant

Risk Phrases:

R36/38: Irritating to eyes and skin

Safety Phrases:

S24/25: Avoid contact with skin and eyes

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.

CONTACT WITH SKIN: Under normal conditions of intended use, this material is not expected to be a skin hazard. Prolonged exposure may cause skin irritation.

EYE CONTACT: Contact with eyes may cause irritation with redness and tearing.

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

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification	Risk Phrases
Water	>99.85%	7732-18-5	231-791-2	None	None
Hypochlorous Acid	<0.15	7790-92-3	232-232-5	[Xi] Irritant	R36/38
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. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

4. FIRST-AID MEASURES

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

SKIN CONTACT: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

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



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INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Non-Flammable

AUTOIGNITION TEMPERATURE: Not Applicable

FLAMMABLE LIMITS (in air by volume, %): Lower NA Upper NA

FIRE EXTINGUISHING MATERIALS: Use fire extinguishing methods below:

Water Spray: Yes

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

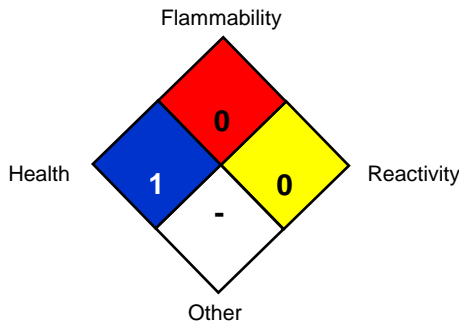
UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered a fire or explosion hazard.

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

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	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

6. ACCIDENTAL RELEASE MEASURES

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 and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

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

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.



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8. EXPOSURE CONTROLS - PERSONAL PROTECTION

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

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, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

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, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or goggles are recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Chemical resistant gloves are recommended to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Not normally required when using this product. If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE (Physical State) and COLOR: Clear colorless liquid with a 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 (SOILD, GAS): Not Applicable

UPPER/LOWER FLAMMABILITY OR EXLOSION 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 COEFFICENT (n-octanol/water): Not Available

AUTO-IGNITION TEMPERATURE: Not Applicable

DECOMPOSITION TEMPERATURE: Not Available

VISCOSITY: 0.001 Pa s @ 20°C

10. STABILITY and REACTIVITY

STABILITY: Stable under conditions of normal storage and use.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products include oxides of carbon

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: None known

POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur.

CONDITIONS TO AVOID: Avoid freezing and excessive temperatures



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11. TOXICOLOGICAL INFORMATION

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: This product may be irritating to skin and eyes.

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.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No specific data available on this product.

CHEMICAL EFFECT ON PLANTS, ANIMALS AND AQUATIC LIFE: This product is not expected to be harmful to plants, animals or aquatic life.

WATER ENDANGERMENT CLASS: Not water endangering in accordance with EU Guideline 91/155-EWG

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

EU Waste Code: Not determined

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.

PROPER SHIPPING NAME: Non-Regulated Material

HAZARD CLASS NUMBER and DESCRIPTION: None

UN IDENTIFICATION NUMBER: None

PACKING GROUP: NA

DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER: None

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).

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.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

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 MSDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.



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

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: None

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 MSDS contains all of the information required by those regulations.

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

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

See Section 2 for Details

NOTE : No Chemical Safety Assessment has been carried out for this substance/mixture by the Supplier.

AUSTRALIAN INFORMATION FOR PRODUCT: The components of this product are listed on the International Chemical Inventory list.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

JAPANESE ENCS INVENTORY: The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac: Listed

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

Swiss Giftlist List of Toxic Substances: Listed

U.S. TSCA: Listed

16. OTHER INFORMATION

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

DATE OF PRINTING: November 18, 2013

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 MSDS SHEET