



**MATERIAL  
SAFETY DATA  
SHEET**

# N-922 ANTIMICROBIAL

DATE: 01/21/2008

CAS NO: 26172-55-4/2682-20-4

SUPERSEDES: 08/18/2006

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** N-922 ANTIMICROBIAL  
**SYNONYMS:** Kathon; (5-Chloro-2-Methyl-4-isothiazolin-3-one (1.15%) and 2-Methyl-4-isothiazolin-3-one (0.35%))  
**CHEMICAL FAMILY:** Organosulfur

VERICHEM, 3499 Grand Avenue, Pittsburgh, PA 15225 (412-331-7299, 8:30 am to 5:00 pm)

**EMERGENCY PHONE:** For any emergency involving spill, leak, fire, exposure, or accident call CHEMTREC: 1-800-424-9300. Outside the USA and Canada call: 703-527-3887.

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### REGULATED COMPONENTS

COMPONENT	CAS NUMBER	PERCENT	WORKER EXPOSURE	REFERENCE
Magnesium Nitrate	10377-60-3	1.7	None established	OSHA / ACGIH

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Corrosive to eyes and skin. Sensitizer. Toxic by inhalation of mist.

### EFFECTS FROM ACUTE EXPOSURE

**Eye Exposure:** Very hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering, and itching. **Skin Exposure:** Hazardous in case of skin contact (corrosive, irritant, sensitizer). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. **Inhalation:** May be harmful if inhaled. Do not breathe spray mists of the undiluted product. Effects will depend upon solution strength and length of time of exposure. **Ingestion:** Ingestion is not expected to be a primary route of exposure. Effects from Chronic Exposure: The following information is based on tests with one or more of the active ingredients. In vitro mutagenicity studies reported both positive and negative results. Animal tests for birth defects were negative. Chronic dietary and drinking water studies did not reveal any adverse effects. Repeated exposure to skin may cause allergic reactions. This product has caused allergic reactions in animal studies and has been reported to cause allergic reactions in people.

## 4. FIRST AID MEASURES (IN CASE OF CONTACT)

**EYE:** Flush immediately with copious amounts of tap water or normal saline (minimum of 15 minutes). Take exposed individual to a health care professional preferably an ophthalmologist, for further evaluation. **SKIN:** Wash exposed area with plenty of water. Repeat washing. Remove contaminated clothing and wash thoroughly before reuse. If irritation persists consult a health care professional. **INHALATION:** If exposure by inhalation is suspected, immediately move exposed individual to fresh air. If individual experiences nausea, headache, dizziness, has difficulty in breathing or is cyanotic, seek a health care professional immediately. **INGESTION:** **DO NOT INDUCE VOMITING.** Rinse with copious amounts of water or milk, first. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water or milk. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-comatose, comatose or convulsing, **DO NOT GIVE FLUIDS BY MOUTH.** In case of intentional ingestion of the product seek medical assistance immediately; take individual to nearest medical facility.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT CLOSED CUP:** >100° C (212° C) Pensky Martens  
**FLAMMABLE LIMITS (% BY VOLUME):** Not Available.  
**EXTINGUISHING MEDIA:** Water fog, carbon dioxide, foam, dry chemical.  
**SPECIAL FIREFIGHTING PROCEDURES:** Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. **ACCIDENTAL RELEASE MEASURES**

**SPILL AND LEAK RESPONSE GUIDELINE:**

Important: Before responding to a spill or leak of this product, review each section of this MSDS. Follow the recommendations given in the Handling Precautions sections. Check the Fire and Explosion Data section to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritating fumes are present, consider evacuation of enclosed areas. Initially minimize area affected by the spill or leak. Block any potential routes to water systems (e.g. sewers, streams, lakes, etc.). Based on the product's toxicological and chemical properties, and on the size and location of the spill or leak, assess the impact on contaminated environments (e.g. water systems ground, air equipment, etc.). There are no methods available to completely eliminate any toxicity this product may have on aquatic environments. Minimize adverse effects on these environments. Determine if federal, state, and/or local release notification is required (see Regulatory Classifications section of this MSDS). Recover as much of the pure product as possible into appropriate containers. Later, determine if this recovered product can be used for its intended purpose. Address clean-up of contaminated environments. Spill or leak residuals may have to be collected and disposed of. Clay, soil, or commercially available absorbents may be used to recover any materials that can not readily be recovered as pure product. Flushing residual material to an industrial sewer, if present at the site of the spill or leak incident, may be acceptable if authorized approval is obtained. If product and/or spill/leak residuals are flushed to an individual sewer, insure that they do not come into contact with incompatible materials. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leaks of this product to the industrial sewer.

7. **HANDLING**

**HANDLING:** Rubber gloves, safety glasses or goggles, body protective clothing and shoes are required. If splashing can occur, a face shield is advisable. Eye-wash fountains in the work place are recommended. Local exhaust should be maintained to control vapor and mist levels. Respiratory protection (organic vapor/acid gas respirator) is required for work areas where misting may occur. The handling precautions for this product are based on the characteristics of the neat product unless otherwise specified.

8. **PERSONAL PROTECTION**

**EYE PROTECTION REQUIREMENTS:** Chemical splash goggles and face shield. **SKIN PROTECTION REQUIREMENTS:** Chemical resistant gloves and protective clothing. (Gloves of butyl rubber or nitrile may provide protection against permeation. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use.) **RESPIRATORY REQUIREMENTS:** If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134). **VENTILATION REQUIREMENTS:** Local exhaust ventilation may be required in addition to general room ventilation to maintain airborne concentrations below exposure limits.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE AND ODOR:</b>	Clear to light green liquid with a pungent, strong odor
<b>BOILING POINT:</b>	100°C (212°F)
<b>FREEZING POINT:</b>	-3° C (26.6° F)
<b>VAPOR PRESSURE:</b>	0.01 mm Hg @20° C
<b>SPECIFIC GRAVITY:</b>	1.02 g/cm <sup>3</sup>
<b>PERCENT VOLATILE (BY WEIGHT):</b>	95-96
<b>pH:</b>	2.5 – 5.0 (neat); 6.5 (100 ppm in water)
<b>SOLUBILITY IN WATER:</b>	Complete
<b>OXIDIZING/REDUCING PROPERTIES:</b>	Not Available
<b>VISCOSITY:</b>	Dynamic: 3 cP

**NOTE: THE PHYSICAL DATA PRESENTED ABOVE ARE TYPICAL VALUES AND SHOULD NOT BE CONSTRUED AS SPECIFICATIONS.**

10. **STABILITY AND REACTIVITY**

**STABILITY:** Stable under normal conditions of use and storage. **INCOMPATIBILITY:** Strong acids, strong bases, strong oxidizers, reducing agents, amines, and mercaptans. **HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition of product can produce toxic vapors of sulfur dioxide, hydrogen chloride, and oxides of nitrogen.

**11. TOXICOLOGICAL INFORMATION****ACUTE EFFECTS:**

Acute Oral LD<sub>50</sub> = 3810 mg/kg Rat  
 Acute Dermal LD<sub>50</sub> = >5000 mg/kg Rabbit  
 Acute Inhalation LC<sub>50</sub> = 1.4 mg/l (4 hrs) Female Rat  
 Acute Inhalation LC<sub>50</sub> = 1.5 mg/l (4 hrs) Male Rat

**IRRITANT/SENSITIZATION EFFECTS:** Very hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (corrosive, irritant, sensitizer). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or occasionally, blistering. May be harmful if inhaled. Do not breathe spray mists of the undiluted product. Effects will depend upon solution strength and length of time of exposure. Carcinogenic Potential: **Not shown as a carcinogen by OSHA, IARC, or NTP Target Organs Effects:** May cause damage to the following organs: upper respiratory tract, eyes. Other Health Effects: The following information is based on tests with one or more of the active ingredients. In vitro mutagenicity studies reported both positive and negative results. Animal tests for birth defects were negative. Chronic dietary and drinking water studies did not reveal any adverse effects. Repeated exposure to skin may cause allergic reactions. This product has caused allergic reactions in animal studies and has been reported to cause allergic reactions in people.

**12. ECOLOGICAL INFORMATION**

LC<sub>50</sub> = 0.16 mg/l (48 hr Daphnia magna)  
 LC<sub>50</sub> = 0.28 mg/l (96 hr bluegill sunfish)  
 LC<sub>50</sub> = 0.19 mg/l (96 hr rainbow trout)  
 LC<sub>50</sub> = 0.3 mg/l (96 hr sheepshead minnow)  
 LC<sub>50</sub> = 0.55 mg/l (96 hr Sand shrimp)  
 LC<sub>50</sub> = 0.01 mg/l (96 hr Bay mussel)

**13. DISPOSAL CONSIDERATION**

**Note: Follow federal, state, and local regulations governing the disposal of waste materials. Contaminated Materials:** Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management unit. If off-site management is required, contact a company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act. Check the characteristics of the material to be disposed of and/or the physical and reactivity data given in this MSDS for the neat product. **Container Disposal:** Empty containers, as defined by appropriate sections of the RCRA, are not RCRA hazardous wastes. However, insure proper management of any residuals remaining in container.

**14. TRANSPORT INFORMATION**

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	DOT Shipping Information	IMO Shipping Information	ICAO/IATA	TRANSPORT CANADA
Shipping Name	Corrosive liquid, acidic, organic, n.o.s. (contains 5-Chloro-2-methyl-4-isothiazolin-3-one)	Corrosive liquid, acidic, organic, n.o.s. (contains 5-Chloro-2-methyl-4-isothiazolin-3-one)	Corrosive liquid, acidic, organic, n.o.s. (contains 5-Chloro-2-methyl-4-isothiazolin-3-one)	Corrosive liquid, acidic, organic, n.o.s. (contains 5-Chloro-2-methyl-4-isothiazolin-3-one)
Hazard Class	Corrosive	Corrosive	Corrosive	Corrosive
Packing Group	II	II	II	II
Subsidiary Class	8	8	8	8
UN/ID Number	3265	3265	3265	3265
Transport Label Required	Corrosive	Corrosive	Corrosive	Corrosive
Packing Instructions Passenger Cargo			808 812	
Max. Net Quantity Passenger Cargo			1 LITER 30 LITER	
D.O.T. Hazardous Substances				
IMDG Page				

15. **REGULATORY INFORMATION**

The following Regulations are known to apply to the use and disposal of this product. Additional Federal, State and Local regulations may also be applicable.

SARA (Superfund Amendments and Reauthorization Act)

**SARA 302** Extremely Hazardous Substances List: No components of this product are listed.

**SARA 312** Hazard Category: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

**SARA 313** Toxic Chemicals List: This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372: MAGNESIUM NITRATE

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)

No components of this product are present above the *de minimus* levels.

RCRA (Resource Conservation and Recovery Act) Listed Hazardous Waste: No components of this product are listed.

CWA (Clean Water Act) Listed Substances: No components of this product are listed.

FDA (Food and Drug Administration): This product is approved under the following FDA (21 CFR) section:

175:105 – Limitations: For use only as an antimicrobial agent in polymer latex emulsions. / 175.300, 175.320 –

Limitation: For use as an antimicrobial agent in emulsion-based silicon coatings at a level not to exceed 5- mg

active ingredients/kg in the coating formulation. / 176.170,176.180 – Limitations: For use only 1) as an antimicrobial agent for polymer latex emulsions in paper coatings at a level not to exceed 50 ppm active ingredient in the coating formulation and 2) as an antimicrobial agent for finished coatings and for additives used in the manufacture of paper and paperboard including fillers, binders, pigment slurries, and sizing solutions at a level not to exceed 25 ppm active ingredients in the coating formulations and additives. / 176.300- Limitations: Not to exceed 2.5 pounds per ton of dry weight fiber.

TSCA (Toxic Substances Control Act) Applicability: All components are listed on the TSCA Inventory.

Registered pesticides are exempt from the requirements of TSCA.

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act): This product is a registered pesticide. EPA Reg. No. 1448-348-67869

16. **OTHER INFORMATION**

NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)

HMIS/NPCA RATING

FIRE: 0

HEALTH: 3

REACTIVITY: 0

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