Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

KATHON (TM) 893MW BIOCIDE

Revision date: 02/08/2008

Supplier Rohm and Haas Company
100 Independence Mall West
Philadelphia, PA 19106-2399 United States of America

For non-emergency information contact: 215-592-3000

Emergency telephone

Spill Emergency	215-592-3000
Health Emergency	215-592-3000
Chemtrec	800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
2-n-Octyl-4-isothiazolin-3-one	26530-20-1	43.0 - 47.0%
Propanediol	57-55-6	53.0 - 57.0%
Water	7732-18-5	<= 0.3%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form	liquid
Colour	yellow
Odour	Odorless

Hazard Summary	**DANGER!** CORROSIVE CAUSES SEVERE EYE/SKIN BURNS. MAY CAUSE SENSITIZATION BY SKIN CONTACT. IRRITATING TO RESPIRATORY SYSTEM.

Potential Health Effects
Primary Routes of Entry: Inhalation
Eye contact
Skin contact

Eyes: Material can cause the following:
corrosion to eyes
May cause permanent eye injury.

Skin: Material can cause the following:
corrosion to the skin
burns
May cause sensitization of susceptible persons by skin contact.

Ingestion: May be harmful if swallowed.

Inhalation: Inhalation of vapor or mist can cause the following:
irritation of nose, throat, and lungs

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Give artificial respiration if breathing has stopped. If symptoms persist, call a physician.

Skin contact: IMMEDIATELY get under a safety shower. Remove contaminated clothing. Wash off with soap and water. Immediate medical attention is required. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Discard contaminated shoes, belts, and other articles made of leather.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Ingestion: Drink 1 or 2 glasses of water. IMMEDIATELY see a physician. Never give anything by mouth to an unconscious person.

Notes to physician
MATERIAL IS CORROSIVE. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsions maybe necessary.

5. FIRE-FIGHTING MEASURES

Flash point	93 ℃ (199.40 ℉) PENSKY MARTENS CLOSED CUP
Ignition temperature	371.0 ℃ (699.80 ℉) Solvent
Lower explosion limit	2.60 %(V)Propylene glycol
Upper explosion limit	12.50 %(V)Propylene glycol
Suitable extinguishing media:	Use extinguishing media appropriate for surrounding fire.

Specific hazards during fire fighting: Combustion generates toxic fumes of the following: nitrogen oxides (NOx) sulfur oxides

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and protective suit.

Further information: Cool containers / tanks with water spray.
Minimize exposure.
Do not breathe fumes.
Contain run-off.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear a NIOSH approved (or equivalent) respirator (with organic vapor/acid gas cartridge and a dust/mist filter) during spill clean-ups and deactivation of this material.
MATERIAL IS CORROSIVE. Protective clothing, including chemical splash goggles, nitrile or butyl rubber full length gloves, rubber apron, or clothing made of nitrile or butyl rubber, and rubber overshoes must be worn during spill clean-ups and deactivation of this material. If material comes in contact with the skin during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.

Methods for cleaning up
WARNING: KEEP SPILLS AND CLEAN-UP RESIDUALS OUTOF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. Adsorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated materials to suitable containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deac tivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits and regulations). DO NOT add deactivation solution to the waste pail to deactivate the adsorbed material. See Section 13, "Disposal Considerations", for information regarding the disposal of contained materials.

7. HANDLING AND STORAGE

Handling
This material is corrosive. For personal protection see section 8. Do not handle material near food, feed or drinking water.
Further information on storage conditions: CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied. Expiration date based only on retention of >95% actives during storage at 20ºC-25ºC (68ºF-77ºF).

Storage
Storage conditions: Keep in a well-ventilated place. Store in a cool and shaded area. Do not store this material in containers made of the following: steel Do not store this material near food, feed or drinking water. Keep container tightly closed.
Storage temperature: >= 1 °C (>= 34 °F)
Storage temperature: <= 37 °C (<= 99 °F)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value
2-n-Octyl-4-isothiazolin-3-one	Rohm and Haas	TWA	0.2 mg/m3
	Rohm and Haas	STEL	0.6 mg/m3

Component	Regulation	Type of listing	Value
Propanediol	Rohm and Haas	TWA	175 ppm
	WEEL	TWA Aerosol.	10 mg/m3

Eye protection: Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Hand protection: Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): butyl-rubber Nitrile rubber Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. NOTE: Material is a possible skin sensitizer.

Skin and body protection: Wear as appropriate: Chemical resistant apron complete suit protecting against chemicals

Respiratory protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and R95 or P95 filters.

Protective measures: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Engineering measures: Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	yellow
Odour	Odorless
pH	2.4 (10% solution)
Boiling point/boilingrange	188 °C (370.40 °F)
Melting point/range	-40.00 °C (-40.00 °F)
Flash point	93 °C (199.40 °F) PENSKY MARTENS CLOSED CUP
Ignition temperature	371 °C (699.80 °F) Solvent
Lower explosion limit	2.60 %(V)Propylene glycol
Upper explosion limit	12.50 %(V)Propylene glycol
Vapour pressure	0.1 mmHg Propylene glycol
Relative vapour density	>1.0
Water solubility	Moderately soluble
Relative density	1.03 at 20.00 °C (68.00 °F)
Viscosity, dynamic	40.000 mPa.s at 20.00 °C (68.00 °F) Brookfield
Evaporation rate	<1.00
Percent volatility	<56 %

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Hazardous reactions	Stable under recommended storage conditions.
Materials to avoid	Avoid contact with the following: Oxidizing agents Amines Reducing agents mercaptans
Hazardous decomposition products	nitrogen oxides (NOx), Sulphur oxides, hydrogen chloride,
polymerization	Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	LD50 rat 760 mg/kg
Acute inhalation toxicity	LC50 rat 4 h 1.25 mg/l aerosol
Acute dermal toxicity	LD50 rabbit 690 mg/kg
Skin irritation	rabbit Corrosive

Eye irritation	rabbit Corrosive
Sensitisation	guinea pig Causes sensitization.

Carcinogenicity:
Did not show carcinogenic effects in animal experiments.
Carcinogenicity:
Active ingredient
Teratogenicity
Did not show teratogenic effects in animal experiments.
Teratogenicity
Active ingredient
Mutagenicity
Non-mutagenic
Mutagenicity
Active ingredient

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Physico-chemical removability	Activated Sludge Respiration Inhibition EC50: 47 mg/l ai
Ecotoxicity effects	
Toxicity to fish	LC50 Oncorhynchus mykiss (rainbow trout) 96 h 0.047 mg/l Active ingredient
Toxicity to fish	LC50 Bluegill sunfish 96 h 0.18 mg/l Active ingredient
Toxicity to algae	EC50 Algae (Selenastrum capricornutum) 0.004 mg/l Active ingredient
Toxicity to aquatic invertebrates	EC50 Daphnia magna 48 h 0.32 mg/l Active ingredient

13. DISPOSAL CONSIDERATIONS

Disposal

Waste Classification: - D021
When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste with the characteristic of toxicity.
Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations. (See 40 CFR 268)

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Corrosive liquids, toxic, n.o.s.(, 2-n-Octyl-4-isothiazolin-3-one)
UN-Number	UN 2922
Class	8 (6.1)
Packing group	II

IMO/IMDG

Proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S.(2-n-Octyl-4-isothiazolin-3-one)
UN-Number	UN 2922
Class	8 (6.1)
Packing group	II
Marine pollutant	2-n-Octyl-4-isothiazolin-3-one

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations

15. REGULATORY INFORMATION

Workplace Classification
This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is subject to regulation under the Canadian Pest Control Products Act (P.C.P. Act). Therefore, this product is excluded from the supplier labeling and material safety data sheet requirements as specified in Section 12 of the Hazardous Products Act.

SARA TITLE III: Section 311/312 Categorizations (40CFR370): Acute Health Hazard

SARA TITLE III: Section 313 Information (40CFR372)
This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40CFR302.4)
Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

US. Toxic Substances Control Act (TSCA) All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

European Union
The European classification of the product is based on the results of toxicity and/or ecotoxicity tests and not the calculation method (Directive 99/45/EEC)

16. OTHER INFORMATION

Hazard Rating

	Health	Fire	Reactivity
HMIS	3	1	0

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
BAc	Butyl acetate
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit (STEL):
TLV	Threshold Limit Value
TWA	Time Weighted Average (TWA):
|	Bar denotes a revision from prior MSDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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