Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

KATHON (TM) 886 MW BIOCIDE

Revision date: 04/20/2009

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
5-Chloro-2-methyl-4-isothiazolin-3-one	26172-55-4	10.0 - 12.0%
2-Methyl-4-isothiazolin-3-one	2682-20-4	3.0 - 5.0%
Magnesium nitrate	10377-60-3	16.0 - 21.0%
Magnesium Chloride	7786-30-3	<= 10.0%
Water	7732-18-5	60.0 - 64.0%

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance

Form	liquid
Colour	Pale Yellow to Amber

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	Noncombustible
Lower explosion limit	not applicable
Upper explosion limit	not applicable

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Specific hazards during fire fighting: Combustion generates toxic fumes of the following: hydrogen chloride 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 20°C-25°C (68°F-77°F).

Storage
Storage conditions: Keep in a well-ventilated place. The product as supplied may evolve gas (largely carbon dioxide) slowly. To prevent the buildup of pressure the product is packaged in specially vented containers, where necessary. Keep this product in the original container when not in use. Container must be stored and transported in an upright position to prevent spilling the contents through the vent, where fitted. Do not store this material in containers made of the following: steel Do not store this material near food, feed or drinking water.
Storage temperature: >= 1 °C (>= 34 °F)
Storage temperature: <= 55 °C (<= 131 °F)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value
5-Chloro-2-methyl-4-isothiazolin-3-one	Rohm and Haas	TWA	0.076 mg/m3
	Rohm and Haas	STEL	0.23 mg/m3

Component	Regulation	Type of listing	Value
2-Methyl-4-isothiazolin-3-one	Rohm and Haas	TWA	1.5 mg/m3
	Rohm and Haas	STEL	4.5 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 PVC gloves >1 mm thickness 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: Typical use of this material does not result in workplace exposures that exceed the exposure limits listed in the Exposure Limit Information Section. For those special workplace conditions where the listed exposure limits are exceeded, a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. For concentrations up to 10 times the exposure limit, wear a properly fitted NIOSH approved (or equivalent) half-mask or full facepiece air purifying respirator equipped with organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters. For those unlikely situations where exposure may greatly exceed the listed exposure limits (i.e. greater than 10-fold), or in any emergency situation, wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode or a full facepiece airline respirator in the pressure demand mode with emergency escape provision. See SECTION 6, Accidental Release Measures, for respirator and protective clothing requirements for spill clean-up and decontamination of this material.

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	Pale Yellow to Amber
pH	1.0 - 3.0
Boiling point/boiling range	100 °C (212.00 °F) Water
Melting point/range	-33.00 °C (-27.40 °F)
Flash point	Noncombustible

Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	0.0027 mmHg Component No. 1
Relative vapour density	0.6
Water solubility	completely soluble
Relative density	1.30
Viscosity, dynamic	16.000 mPa.s at 25.00 °C (77.00 °F)
Evaporation rate	<1.00
Percent volatility	60 - 64 % Water

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,
polymerisation	Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	LD50 rat 457 mg/kg
Acute inhalation toxicity	LC50 rat 4 h 0.33 mg/l Active ingredient
Acute dermal toxicity	LD50 rabbit 660 mg/kg
Skin irritation	rabbit Corrosive
Eye irritation	rabbit Corrosive
Sensitisation	guinea pig Causes sensitization.

Carcinogenicity:
Carcinogenicity: Non-carcinogenic in both a mouse dermal and rat oral carcinogenicity study. Active ingredient
Reproductive toxicity
This product is not a reproductive hazard. Active ingredient
Teratogenicity
Did not show teratogenic effects in animal experiments. Active ingredient
Mutagenicity
Non-mutagenic Active ingredient

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
Biodegradability

Biodegradation (aquatic metabolism): CAS # 26172-55-4 t 1/2 anaerobic = 4.8 hr, CAS # 26172-55-4 t 1/2 aerobic = 17.3 hr, CAS # 2682-20-4 t 1/2 aerobic = 9.1 hr

Physico-chemical removability	Activated Sludge Respiration Inhibition EC50: 4.5 mg/L ai
Ecotoxicity effects	
Toxicity to fish	LC50 Oncorhynchus mykiss (rainbow trout) 96 h 0.19 mg/l Active ingredient
Toxicity to fish	LC50 Lepomis macrochirus (Bluegill sunfish) 96 h 0.28 mg/l Active ingredient
Toxicity to algae	EC50 Marine algae (Skeletonema costatum) 0.003 mg/l Active ingredient
Toxicity to algae	EC50 Algae (Selenastrum capricornutum) 0.018 mg/l Active ingredient
Toxicity to aquatic invertebrates	EC50 Daphnia magna 48 h 0.16 mg/l Active ingredient

13. DISPOSAL CONSIDERATIONS

Disposal

Waste Classification: D002

When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste with the characteristic of corrosivity.

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.(5-Chloro-2-methyl-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.(5-Chloro-2-methyl-4-isothiazolin-3-one)
UN-Number	UN 2922
Class	8 (6.1)
Packing group	II
Marine pollutant	5-Chloro-2-methyl-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 contains a chemical which is listedin Section 313 at or above de minimis concentrations. The following listed chemicals are present: (Quantity present is found elsewhere on this MSDS.)
SARA Title III Components: Magnesium nitrate (10377-60-3) as nitrate compound

CERCLA Information (40CFR302.4)
This material is regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304. This material is or contains chemical(s) listed in 40 CFR Table 302.4 or nondesignated RCRA ICR substance(s). (Nondesignated ICR substances apply to materials that will not be reused.) The Reportable Quantity(s) (RQ) are listed below. Releases in excess of its reportable quantity must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.
D002, 100lbs.

US. Toxic Substances Control Act (TSCA): This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements.

16. OTHER INFORMATION

Hazard Rating

	Health	Fire	Reactivity
HMIS	3	0	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.

Version: 2.2
Print Date: 04/22/2009
Layout 105082