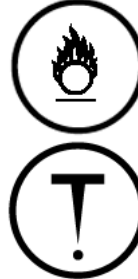




# MATERIAL SAFETY DATA SHEET

## 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® 440**  
 CAS NUMBER MIXTURE  
 MSDS NUMBER 153  
 PRODUCT CODE ND  
 PRODUCT USE SANITANT  
 SYNONYM(S) ND



MANUFACTURER / SUPPLIER Koch Membrane Systems, Inc.  
 850 Main Street  
 Wilmington, MA  
 01887 USA

### TELEPHONE NUMBERS - 24 HOUR ASSISTANCE

Canutec: 613-996-6666  
 Chemtec: 800-424-9300 (inside USA)  
 +1-703-527-3887 (outside USA)

### TELEPHONE NUMBERS - GENERAL ASSISTANCE

(8-5, M-F EST) Product Assistance 978-657-4250

For technical assistance regarding this product, please contact your local Koch Membrane Systems representative.

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration*	Exposure Limits / Health Hazards
SODIUM CARBONATE PEROXYHYDRATE	15630-89-4	70 - 90 %	ND
TETRAACETYLETHYLENEDIAMINE	10543-57-4	10 - 30 %	ND

\*Values do not reflect absolute minimums and maximums; these values are typical which may vary from time to time.

### 3 HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

DANGER!

#### HEALTH HAZARDS

MAY BE SEVERELY IRRITATING TO THE SKIN, EYES AND RESPIRATORY TRACT  
MAY CAUSE ALLERGIC SKIN REACTION (SENSITIZER)  
MAY BE HARMFUL IF SWALLOWED

#### FLAMMABILITY HAZARDS

NON-FLAMMABLE

#### REACTIVITY HAZARDS

STABLE

#### POTENTIAL HEALTH EFFECTS, SKIN

MODERATE TO SEVERELY IRRITATING. Contact may cause reddening, itching and inflammation. May cause an allergic reaction in some individuals (sensitizer).

#### POTENTIAL HEALTH EFFECTS, EYE

MODERATELY TO SEVERELY IRRITATING. Direct contact may cause pain, tears, burns, sensitivity to light, swelling and possible corneal damage.

#### POTENTIAL HEALTH EFFECTS, INHALATION

MODERATELY TO SEVERELY IRRITATING. Symptoms may include sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

#### POTENTIAL HEALTH EFFECTS, INGESTION

May cause painful irritation and burning of the mouth and throat, painful swallowing, labored breathing, burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection.

### 4 FIRST AID MEASURES

#### SKIN

Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. GET IMMEDIATE MEDICAL ATTENTION.

Place contaminated clothing in closed container for storage until laundered or discarded. If clothing is to be laundered, inform person performing operation of contaminant's hazardous properties. Discard contaminated leather goods.

#### EYE

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing.

GET IMMEDIATE MEDICAL ATTENTION.

#### INHALATION

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen.

Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

#### INGESTION

Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Never give anything by mouth to an unconscious person. Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis.

Have victim rinse mouth thoroughly with water, then drink 8 to 10 oz. of water to dilute material in stomach. If milk is available, it may be administered AFTER the water has been given. If vomiting occurs naturally, have the victim lean forward to reduce risk of aspiration. Repeat administration of water. Quickly transport to emergency care facility.

## 5 FIRE FIGHTING MEASURES

### HAZARDOUS COMBUSTION PRODUCTS

Combustion may produce COx, NOx.

### EXTINGUISHING MEDIA

Use water. Do not use dry chemicals or foams.

### BASIC FIRE FIGHTING PROCEDURES

Evacuate area and fight fire from a safe distance.

Use water spray to cool adjacent structures and to protect personnel.

Fire fighters must wear approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

### UNUSUAL FIRE & EXPLOSION HAZARDS

Decomposes to form oxygen. This product may accelerate burning when involved in a fire.

Do not allow water to enter container because of violent reaction. Keep container tightly closed. Powerful oxidizing agent; may ignite oxidizable materials.

Flash Point	NA
Autoignition Temperature	NA
Flammability Limits in Air, Lower, % by Volume	NA
Flammability Limits in Air, Upper, % by Volume	NA

## 6 ACCIDENTAL RELEASE MEASURES

### EMERGENCY ACTION

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. (See Exposure Controls/Personal Protection in Section 8.)

### ENVIRONMENTAL PRECAUTIONS

If product is released to the environment, take immediate steps to stop and contain release. Caution should be exercised regarding personnel safety and exposure to the released product. Notify local, provincial and/or federal authorities, if required.

### SPILL OR LEAK PROCEDURE

Shovel into a container for reclamation or later disposal. Oxidizing material. Avoid excessive generation of dust. If dust is generated, appropriate respiratory, eye and skin protection should be used to protect personnel during clean-up.

If necessary: Neutralize spill with a weak acid such as vinegar or acetic acid.

Do not touch or walk through spilled material.

See Exposure Controls/Personal Protection (Section 8).

## 7 HANDLING & STORAGE

### HANDLING

Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Do not cut, grind, drill, weld in the vicinity of the product or reuse containers unless adequate precautions are taken against these hazards.

Equipment used for handling product should be made only of compatible material including but not limited to glass, stainless steel, or plastic.

Do not eat, drink or smoke in areas of use or storage. Wash hands thoroughly before eating, drinking or smoking.

## STORAGE

Store in a dry, isolated, and well-ventilated area away from sources of ignition and incompatibles. Do not store in tightly closed containers or in unventilated areas. Do not double stack containers. Do not store near reducing agents or fuels.

Avoid contamination. Contamination may cause decomposition and generation of oxygen gas which could result in high pressure and container rupture. Do not return unused product to original container.

Empty containers may contain product residue. Do not reuse without adequate precautions. Rinse empty containers out with water prior to disposal.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### ENGINEERING CONTROLS

General or local exhaust ventilation and other forms of engineering controls are the preferred means for controlling exposures. If ventilation cannot reduce airborne concentrations below acceptable limits, appropriate respiratory protection should be used.

### EYE PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Wear chemical safety goggles to prevent eye contact. Have eye washing facilities readily available where eye contact can occur.

### SKIN PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

Avoid skin contact with this material. Protective glove materials include, but are not limited to rubber. Additional protection may be necessary to prevent skin contact including use of apron, armcovers, face shield, or boots.

Provide safety showers at any location where skin contact can occur.

Use good personal hygiene.

### RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

A NIOSH/MSHA approved air purifying respirator with an acid gas cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

## 9 PHYSICAL & CHEMICAL PROPERTIES

### ODOR AND APPEARANCE

WHITE TO OFF WHITE SOLID CRYSTALS WITH SLIGHT ODOR

Specific Gravity NOT AVAILABLE

Melting Point NOT AVAILABLE

pH Value ND

Molecular Formula MIXTURE

Molecular Weight MIXTURE

Chemical Family OXIDIZER

Odor Threshold

## 10 STABILITY & REACTIVITY

### STABILITY/INCOMPATIBILITY

Incompatible with reducing agents, acids, organic materials, metals, moisture. Sodium percarbonate is corrosive to aluminum, zinc and copper.

Avoid contamination.

See precautions under Handling & Storage (Section 7).

## 11 TOXICOLOGICAL INFORMATION

### ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

### LD50

LD50: Sodium Percarbonate - Oral Mouse 2200 mg/kg.

LD50: Tetraacetythylenediamine - Oral Rat 7.94 g/kg

### CARCINOGENICITY

The components in this product are not listed by OSHA, NTP or IARC.

### PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

Pre-existing medical conditions which may be aggravated by exposure include disorders of the eyes, skin and respiratory system.

## 12 ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

ND

### CHEMICAL FATE INFORMATION

Possibly hazardous short-term degradation products of sodium percarbonate are not likely. Long-term degradation products may occur that are hazardous.

## 13 DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL

This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261). Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine, at the time of disposal, whether the material is a hazardous waste subject to RCRA.

## 14 TRANSPORT INFORMATION

### BILL OF LADING - BULK (U. S. DOT)

OXIDIZING SOLID, NOS (sodium percarbonate), 5.1, UN 1479, PG III

### BILL OF LADING - NON-BULK (U. S. DOT)

OXIDIZING SOLID, NOS (sodium percarbonate), 5.1, UN 1479, PG III

Within the United States and Canada; The above description may not cover shipping in all cases, please consult 49 CFR 172.101 for specific shipping information.

## 15 REGULATORY INFORMATION

### FEDERAL REGULATIONS

All components of this product are listed on the TSCA Inventory.

Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Failure to report may result in substantial civil and criminal penalties. There may be specific regulations at the local, regional or state/provincial level that pertain to this product.

### SARA TITLE III RATINGS

Immediate Hazard: X Delayed Hazard: X Fire Hazard: - Pressure Hazard: -  
Reactivity Hazard: X

### STATE REGULATIONS

Based on available information this product does not contain any components or chemicals currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65. Reformulation, use or processing of this product may affect its composition and require re-evaluation.

PENNSYLVANIA - Non-hazardous ingredients present at >3%: None

**WHMIS RATINGS**

Compressed Gas		Flammable/Combustible	Oxidizer	X	Acutely Toxic
Other Toxic Effects	X	Bio Hazardous	Corrosive		Dangerously Reactive

**NFPA RATINGS**

Health	2	Flammability	0	Reactivity	2	Special Hazards	OX
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**HMIS RATINGS****\* - Indicates chronic health hazard**

Health	2*	Flammability	0	Reactivity	2
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**16 OTHER INFORMATION****DISCLAIMER**

This information must be brought to the attention of the person responsible for advising on safety matters. Adequate training and instruction should be given. Appropriate warning and safe handling procedures should be provided to handlers and users. The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, safety data sheets may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damages or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

Current Revision Date 18-Aug-2008

Replaces Sheet Dated

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