



## MATERIAL SAFETY DATA SHEET

### 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® 130**  
CAS NUMBER 144-62-7  
MSDS NUMBER 7152  
PRODUCT CODE ND  
PRODUCT USE CLEANING PRODUCT  
SYNONYM(S) ETHANEDIOIC ACID



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
OXALIC ACID	144-62-7	100 %	1 mg/m <sup>3</sup> 8-Hour TWA (OSHA) 1 mg/m <sup>3</sup> 8-Hour TWA (ACGIH) 2 mg/m <sup>3</sup> 15-Min STEL (ACGIH)

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

WHMIS Classification: D1B, E.

Local authorities should be consulted for exposure limits in effect in your region.

### 3 HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

DANGER!

#### HEALTH HAZARDS

CORROSIVE TO THE SKIN, EYES AND RESPIRATORY TRACT

MAY BE HARMFUL OR FATAL IF SWALLOWED

MAY CAUSE REPRODUCTIVE EFFECTS BASED ON ANIMAL DATA

\*\*SEE "TOXICOLOGICAL INFORMATION" (SECTION 11) FOR MORE INFORMATION

#### FLAMMABILITY HAZARDS

DUSTS MAY BECOME EXPLOSIVE

#### REACTIVITY HAZARDS

STABLE

#### POTENTIAL HEALTH EFFECTS, SKIN

CORROSIVE. Contact may cause reddening, itching, inflammation, burns, blistering and possibly severe tissue damage.

Overexposure to this material may cause systemic damage including target organ effects listed under "Toxicological Data" (See Section 11).

#### POTENTIAL HEALTH EFFECTS, EYE

CORROSIVE. Exposure may cause severe burns, destruction of eye tissue and possible permanent injury or blindness. Dusts may cause mechanical irritation including pain, tearing and redness. May cause conjunctivitis or corneal damage.

#### POTENTIAL HEALTH EFFECTS, INHALATION

EXTREMELY IRRITATING AND CORROSIVE. May cause severe burns and tissue damage to the respiratory tract. Symptoms may include throat burns, constriction of the windpipe (bronchospasms), severe pulmonary edema and death, depending on the concentration and duration of exposure.

#### POTENTIAL HEALTH EFFECTS, INGESTION

Fatal if swallowed. 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. May cause severe irritation with intense burning of the mouth and throat followed by abdominal pain and distress, nausea, vomiting, and diarrhea.

Other specific symptoms of exposure are listed under "Toxicological Information" (Section 11).

### 4 FIRST AID MEASURES

#### SKIN

Immediately flush skin with plenty of water, for at least 15 minutes, 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.

### NOTES TO PHYSICIAN

If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

## 5 FIRE FIGHTING MEASURES

### HAZARDOUS COMBUSTION PRODUCTS

Combustion may produce COx, formic acid, toxic and irritating vapors.

### EXTINGUISHING MEDIA

Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.

### BASIC FIRE FIGHTING PROCEDURES

Do not add water to acid. Water applied directly results in evolution of heat and splattering of acid. Acid can react with metals to liberate flammable hydrogen gas, especially when diluted with water. Evacuate area and fight fire from a safe distance.

Use water spray to cool adjacent structures and to protect personnel. When using water spray, use extreme caution! Acid solution is corrosive. Water or foam may cause frothing.

Firefighters must wear MSHA/NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

### UNUSUAL FIRE & EXPLOSION HAZARDS

Dusts may form explosive mixtures in air.

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

## 6 ACCIDENTAL RELEASE MEASURES

### EMERGENCY ACTION

Eliminate and/or shut off ignition sources and keep ignition sources out of the area. Keep unnecessary people away. Stay upwind; keep out of low areas.

### 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**

Keep unnecessary people away. Isolate area for at least 25 to 50 feet to preserve public safety. For large spills, consider initial evacuation for at least 1000 feet

Shovel into a container for later disposal. Avoid cleanup procedures that may result in water pollution.

Do not touch or walk through spilled 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. Avoid contact with water.

Large spills may be neutralized with dilute alkaline solutions of soda ash or lime.

See Exposure Controls/Personal Protection (Section 8).

## **7 HANDLING & STORAGE**

### **HANDLING**

This material should be stored and shipped in plastic or plastic lined containers. Do not use with materials or equipment sensitive to acidic solutions.

Minimize dust generation during handling and contact.

Dusts may become explosive. 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.

Avoid inhaling dust and contact with skin and eyes.

Do not eat, drink or smoke in areas of use or storage.

### **STORAGE**

Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid contact with strong oxidizers.

Empty containers may contain product residue. Do not reuse without adequate precautions.

Avoid contact with metals. Avoid excessive heat.

## **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.

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

Wear chemical safety goggles and face shield. Have eye washing facilities readily available where eye contact can occur.

Do not wear contact lenses when working with this substance.

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

Avoid skin contact with this material.

If skin contact is anticipated, protective clothing, including impervious gloves, should be worn. Additional protection may be necessary to prevent skin contact including use of apron, armcovers, face shield, or boots.

Use good personal hygiene.

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

A NIOSH/MSHA approved dust respirator should be used as a precautionary measure when airborne contaminants may occur, when there is a potential for uncontrolled release, or when exposure levels are not known.

## 9 PHYSICAL & CHEMICAL PROPERTIES

### ODOR AND APPEARANCE

WHITE CRYSTALLINE ODORLESS SOLID

Boiling Point	ND
Specific Gravity	ND
Melting Point	214 °F (101 °C)
Percent Volatile	ND
Vapor Pressure	NA
Vapor Density	NA
Bulk Density	10.7 LBS/GAL
Solubility in Water	150 GM/L AT 68 °F (20 °C)
Octanol/Water Partn	ND
Volatile Organic	ND
Pour Point	ND
pH Value	< 1
Freezing Point	214 °F (101 °C)
Viscosity	ND
Evaporation Rate	ND
Molecular Formula	C2H2O4
Molecular Weight	90.04
Chemical Family	ORGANIC ACID
Odor Threshold	ND

## 10 STABILITY & REACTIVITY

### STABILITY/INCOMPATIBILITY

Incompatible with strong oxidizers, furfuryl alcohol, silver, sodium chlorate and sodium chlorite. See precautions under Handling & Storage (Section 7).

### HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Reacts with strong oxidants, strong alkalis, chlorites, hypochlorites, causing fire and explosion hazard.

Combustion may produce COx, formic acid, toxic and irritating vapors.

## 11 TOXICOLOGICAL INFORMATION

### ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

### LD50

LD50: Oxalic Acid Rat Oral 7500 mg/kg.

### TOXICOLOGICAL DATA

Acute or chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: kidney, thyroid, blood, brain, cardiovascular, respiratory and nervous systems.

Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: numbness and tingling of fingers, urinary calculi (stones) and gangrene.

### TERATOGENICITY, MUTAGENICITY, OTHER REPRODUCTIVE EFFECTS

May cause adverse reproductive and/or developmental effects.

Pregnant women may be at an increased risk from exposure. Consumption of alcoholic beverages may enhance toxic effects.

## PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

Pre-existing medical conditions which may be aggravated by exposure include disorders of the skin, eye, kidney, respiratory, cardiovascular and nervous systems.

## 12 ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

ND

## 13 DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL

This product, as supplied, when discarded or disposed of, is a hazardous waste according to Federal regulations (40 CFR 261) due to its corrosivity.. 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.

The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state and local regulations.

In Canada, wastes should be disposed of according to federal, state, provincial and local regulations.

## 14 TRANSPORT INFORMATION

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

Corrosive Solid, Acidic, Organic, NOS, (Oxalic Acid), 8, UN3261, PG II

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

Corrosive Solid, Acidic, Organic, NOS, (Oxalic Acid), 8, UN3261, PG II

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.

This product, as supplied, contains no hazardous substances regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302), or any extremely hazardous substances regulated under the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355), and thus a release of this product as supplied has no reporting requirements under these regulations. 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.

This product does not contain toxic chemicals (in excess of the applicable de minimis concentration) that are subject to the annual toxic chemical release reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313 (40 CFR 372).

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:	-						

**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.

**INTERNATIONAL REGULATIONS**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

WHMIS Classification: D1B, E.

All known major components of this product are listed on the Canadian DSL.

**WHMIS RATINGS**

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

**NFPA RATINGS**

Health	3	Flammability	1	Reactivity	0	Special Hazards	-
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**HMIS RATINGS** \* - Indicates chronic health hazard

Health	3*	Flammability	1	Reactivity	0
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**16 OTHER INFORMATION**

**DISCLAIMER**

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, MSDS 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 damage 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.

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Completed By Koch Chemical Technology Group, LLC, call (978) 694-7346 or (978) 657-4250