



# MATERIAL SAFETY DATA SHEET

## 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® 180**  
 CAS NUMBER MIXTURE  
 MSDS NUMBER 70  
 PRODUCT CODE ND  
 PRODUCT USE MEMBRANE ACID CLEANER



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

### TELEPHONE NUMBERS - 24 HOUR ASSISTANCE

Chemtrec: +1(800) 424-9300 (inside USA)  
 +1(703) 527-3887 (outside USA)

### TELEPHONE NUMBERS - GENERAL ASSISTANCE

Product Assistance +1(978) 657-4250  
 8 - 5, M - F, Eastern Time

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration*	Exposure Limits / Health Hazards
2-HYDROXY-1,2,3 - PROPANETRICARBOXYLIC ACID	77-92-9	7 - 13 %	Total Particulate Dust: 15 mg/m <sup>3</sup> 8-Hour TWA (OSHA) Respirable Particulate: 5.0 mg/m <sup>3</sup> 8-Hour TWA (OSHA)
LACTIC ACID	50-21-5	7 - 13 %	ND
ALKYLBENZENESULFONIC ACID (C10-16)	68584-22-5	3 - 7 %	ND

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

WHMIS Classification: D2B, E

### 3 HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

DANGER!

#### HEALTH HAZARDS

CORROSIVE TO THE SKIN, EYES AND RESPIRATORY TRACT

MAY CAUSE BURNS TO SKIN AND EYES - EFFECTS MAY BE DELAYED

MAY CAUSE BLINDNESS

MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN

MAY CAUSE ALLERGIC SKIN REACTION (SENSITIZER)

#### FLAMMABILITY HAZARDS

NON-COMBUSTIBLE

#### REACTIVITY HAZARDS

STABLE

#### POTENTIAL HEALTH EFFECTS, SKIN

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

Contains a component(s) that may cause allergic skin reactions in some individuals.

Absorption from prolonged or repeated skin contact may cause systemic toxicity.

#### POTENTIAL HEALTH EFFECTS, EYE

CORROSIVE. Exposure to vapors, fumes or mists may cause irritation. Exposure may cause severe burns, destruction of eye tissue and possible permanent injury or blindness.

#### POTENTIAL HEALTH EFFECTS, INHALATION

Breathing of the mists, vapors or fumes may irritate the nose, throat and lungs. Symptoms may include sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

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

#### POTENTIAL HEALTH EFFECTS, INGESTION

CORROSIVE. 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. Aspiration into lungs may cause chemical pneumonia and lung damage.

Corrosive damage to the stomach and esophagus may be delayed.

### 4 FIRST AID MEASURES

#### SKIN

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

In case of chemical burns, cover area with sterile dry dressing, bandage securely but not too tightly. 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 30 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not attempt to neutralize with chemical agents. 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 2 to 8 oz. (60 to 240 ml) of water. 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.

This product is primarily an irritant and corrosive. As a corrosive, give attention to potential complication of esophagus or stomach perforations if ingested. Use of emetics and lavage are contraindicated. Necrosis and associated inflammatory processes peak at about 48 hours, but may extend up to four days. Initial healing processes occur during the period 4 to 14 days, but the esophageal wall is weakest during this period.

# **5 FIRE FIGHTING MEASURES**

## **HAZARDOUS COMBUSTION PRODUCTS**

Combustion may produce CO<sub>x</sub>, SO<sub>x</sub>, and irritating vapors.

## **EXTINGUISHING MEDIA**

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

## **BASIC FIRE FIGHTING PROCEDURES**

Evacuate area and fight fire from a safe distance.

Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible. Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire.

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

Flash Point	WILL NOT FLASH
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**

Keep unnecessary people at least 150 feet upwind of spill; greater distances may be necessary for people downwind. See Exposure Control/Personal Protection (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**

Keep unnecessary people away. Isolate area for at least 25-50 meters (80-160 feet) to preserve public safety. For large spills, consider initial evacuation for at least 300 meters (1000 feet).

Absorb spill with inert material (e. g. dry sand or earth) then place in a chemical waste container. Large Spills: Dike far ahead of liquid spill for later disposal. Stop leak when safe to do so.

See Exposure Controls/Personal Protection (Section 8).

## **7 HANDLING & STORAGE**

### **HANDLING**

Avoid skin or eye contact. 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.

## **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.

### **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 air purifying respirator with an appropriate 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**

ODORLESS LIGHT YELLOW LIQUID

Boiling Point	> 212 °F (100 °C)
Specific Gravity	ND
Melting Point	ND
Percent Volatile	ND
Vapor Pressure	ND
Vapor Density	SIMILAR TO WATER
Bulk Density	8.9 LBS/GAL
Solubility in Water	SOLUBLE
Octanol/Water Partn	ND
Volatile Organic	ND
Pour Point	ND
pH Value	< 2
Freezing Point	< 32 °F (<0 °C)
Viscosity	ND
Evaporation Rate	SIMILAR TO WATER
Molecular Formula	ND
Molecular Weight	MIXTURE
Chemical Family	ANIONIC SOAP SOLUTION
Odor Threshold	ND

## 10 STABILITY & REACTIVITY

### STABILITY/INCOMPATIBILITY

Incompatible with oxidizing agents. See precautions under Handling & Storage (Section 7).

### HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Combustion may produce CO<sub>x</sub>, SO<sub>x</sub>, and irritating vapors.

## 11 TOXICOLOGICAL INFORMATION

### ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

### LD50

LD50: Lactic acid, Oral, Rat, 3543 mg/kg

LD50: 2-Hydroxy-1,2,3-propanetricarboxylic acid, Oral, Rat, 3000 mg/kg

### TOXICOLOGICAL DATA

Acute or chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: skin and respiratory tract.

Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: tooth erosion.

### SENSITIZATION TO MATERIAL

The possibility of allergic sensitization should be considered.

### PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

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

## 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 Liquid, Acidic, Organic, N.O.S. (Lactic acid, Alkylbenzenesulfonic acid (C10-16)), 8, UN3265, PG II

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

Corrosive Liquid, Acidic, Organic, N.O.S., (Lactic acid, Alkylbenzenesulfonic acid (C10-16)), 8, UN3265, 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 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).

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: -

### 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%: Water, CAS# 7732-18-5

### INTERNATIONAL REGULATIONS

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

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: D2B, E

**WHMIS RATINGS**

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

**NFPA RATINGS**

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

Health	3*	Flammability	0	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.

Please handle this material with all standard safety precautions appropriate to chemicals of unknown toxicity. This material is for Research and Development purposes only.

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