



# MATERIAL SAFETY DATA SHEET

## 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® L-11**  
 CAS NUMBER MIXTURE  
 MSDS NUMBER 31  
 PRODUCT CODE ND  
 PRODUCT USE MEMBRANE CLEANER



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

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration*	Exposure Limits / Health Hazards
TETRASODIUM ETHYLENEDIAMINE TETRAACETATE	64-02-8	< 10 %	ND
TRISODIUM NITRILOTRIACETATE	5064-31-3	< 0.2 %	ND

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

WHMIS Classification: D2B, E.

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

### 3 HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

DANGER!

#### HEALTH HAZARDS

CORROSIVE TO EYES AND SKIN.

CAUSES BURNS OF THE MOUTH AND THROAT.

MAY CAUSE SKIN IRRITATION

ASPIRATION HAZARD IF SWALLOWED-CAN ENTER LUNGS AND CAUSE DAMAGE

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

#### FLAMMABILITY HAZARDS

NON-COMBUSTIBLE

#### REACTIVITY HAZARDS

STABLE

#### POTENTIAL HEALTH EFFECTS, SKIN

The following evaluation is based on a component(s) of this material.

CORROSIVE. Prolonged or repeated exposure may cause skin irritation, even a burn. Contact may cause reddening, itching and inflammation. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

#### POTENTIAL HEALTH EFFECTS, EYE

The following evaluation is based on a component(s) of this material.

CORROSIVE. May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Mists may cause eye irritation. Direct contact may cause pain, tears, burns, sensitivity to light, swelling and possible corneal damage.

#### POTENTIAL HEALTH EFFECTS, INHALATION

The following evaluation is based on a component(s) of this material.

Under normal conditions, inhalation is not expected to be a problem. However, respiratory tract irritation may occur if exposed to fumes or mists. Symptoms may include sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

#### POTENTIAL HEALTH EFFECTS, INGESTION

CORROSIVE. Not a normal route of exposure. May cause severe irritation with intense burning of the mouth and throat followed by abdominal pain and distress, nausea, vomiting, and diarrhea.

Aspiration into lungs may cause chemical pneumonia and lung damage. Overexposure to this material may cause systemic damage including target organ effects listed under "Toxicological Information" (Section 11).

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.

## **5 FIRE FIGHTING MEASURES**

### **HAZARDOUS COMBUSTION PRODUCTS**

Combustion may produce COx, NOx, SOx

### **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.

If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak.

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.

### **UNUSUAL FIRE & EXPLOSION HAZARDS**

Reacts with most metals to produce hydrogen gas which can form an explosive mixture with air.

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 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**

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.

Spilled material may be slippery.

See Exposure Controls/Personal Protection (Section 8).

## **7 HANDLING & STORAGE**

### **HANDLING**

Avoid overheating or freezing.

Spilled material may be slippery.

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.

Store at room temperature (45°F to 110°F).

Avoid contact with carbon steel, zinc, nickel, copper, copper alloy and aluminum. Contact with aluminum may produce flammable hydrogen gas.

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.

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 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**

CLEAR TO SLIGHTLY YELLOW LIQUID WITH SLIGHT ODOR

Boiling Point	212 ° F (100° C)
Specific Gravity	1.04
Melting Point	32 ° F (0° C)
Percent Volatile	> 90
Vapor Pressure	ND
Vapor Density	ND
Bulk Density	8.5 - 9 LBS/GAL
Solubility in Water	MISCIBLE
Octanol/Water Partn	ND
Volatile Organic	ND
Pour Point	ND
pH Value	12.9
Freezing Point	ND
Viscosity	ND
Evaporation Rate	ND
Molecular Formula	NA
Molecular Weight	ND
Chemical Family	CLEANING SOLUTION
Odor Threshold	ND

## 10 STABILITY & REACTIVITY

### STABILITY/INCOMPATIBILITY

Incompatible with strong oxidizing agents.

Avoid contact with aluminum. Flammable hydrogen gas may be formed in the presence of aluminum.

See precautions under Handling & Storage (Section 7).

### HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Combustion may produce COx, NOx, SOx, reactive hydrocarbons, hydrogen sulfide and ammonia.

## 11 TOXICOLOGICAL INFORMATION

### ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

### LD50

LD50 (skin-rabbit) > 5,000 mg/kg [For EDTA tetrasodium salt]

LD50 (oral-rats) = 3,030 mg/kg [For EDTA tetrasodium salt]

### CARCINOGENICITY

This material contains a very small amount of the trisodium salt of nitrilotriacetic acid which is listed as a potential carcinogen by IARC, NTP and OSHA. Although large dietary doses of trisodium nitrilotriacetate have caused urinary tumors in laboratory animals, there is little likelihood that it could cause cancer in humans, especially at subtoxic doses.

### TERATOGENICITY, MUTAGENICITY, OTHER REPRODUCTIVE EFFECTS

EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus.

### PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

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

## 12 ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined on product as a whole. Studies using EDTA sodium salts did not show toxicity below 100 mg/kg.

## 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, Basic, Organic, N.O.S. (tetrasodium ethylenediaminetetraacetate ), 8, UN3267, PG III

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

Corrosive Liquid, Basic, Organic, N.O.S. (tetrasodium ethylenediaminetetraacetate), 8, UN 3267, PG III

## 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.

Failure to report may result in substantial civil and criminal penalties. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations.

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%: Water, CAS # 7732-18-5

## INTERNATIONAL REGULATIONS

### CANADA

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
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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.

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