



MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN™ ENZ-10 P**
CAS NUMBER MIXTURE
MSDS NUMBER 7195
PRODUCT CODE ND
PRODUCT USE ENZYME/DETERGENT CLEANER
SYNONYM(S) ND



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

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	497-19-8	2.5 - 10 %	ND
BENZENESULFONIC ACID, SODIUM SALTS	68081-81-2	10 - 25 %	ND
TETRASODIUM PYROPHOSPHATE	7722-88-5	2.5 - 10 %	Nuisance Dust
SODIUM LAURYL SULFATE	151-21-3	2.5 - 10 %	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!

MAY CAUSE SEVERE SKIN IRRITATION
CORROSIVE TO EYES.

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

FLAMMABILITY HAZARDS
NON-COMBUSTIBLE

REACTIVITY HAZARDS
STABLE

POTENTIAL HEALTH EFFECTS, SKIN

MODERATE TO SEVERELY IRRITATING. Contact may cause reddening, itching, inflammation, burns, blistering and possibly severe tissue damage. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage.

POTENTIAL HEALTH EFFECTS, EYE

CORROSIVE. Direct contact may cause pain, tears, burns, sensitivity to light, swelling and possible corneal damage. Exposure may cause severe burns, destruction of eye tissue and possible permanent injury or blindness. Prolonged or repeated exposure may cause irritation, pain, conjunctivitis and possible corneal damage.

POTENTIAL HEALTH EFFECTS, INHALATION

MODERATELY TO SEVERELY IRRITATING. Symptoms may include throat burns, constriction of the windpipe (bronchospasms), severe pulmonary edema and death, depending on the concentration and duration of exposure.

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

POTENTIAL HEALTH EFFECTS, INGESTION

MODERATELY TO SEVERELY IRRITATING AND/OR 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. Corrosive damage to the stomach and esophagus may be delayed.

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.

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. If victim is conscious and alert, give 1-3 glasses of water or milk to dilute stomach contents. If spontaneous vomiting occurs keep head below hips to prevent aspiration and monitor for breathing difficulty.

NOTES TO PHYSICIAN

Treat as an alkali corrosive; these agents damage the gastrointestinal tract by liquefaction necrosis which permits deep tissue penetration. Severe alkali burns may extend to adjacent viscera. Acute symptoms may not indicate the severity of tissue injury, but signs of chronic injury may include drooling, inability to swallow, erythema and/or ulceration of the oral pharynx, hematemesis, and occasionally shock and respiratory distress. Necrosis and associated inflammatory processes peak at 48 hours, but extend up to 4 days. Initial healing processes occur during the period of 4-14 days, but the esophageal wall is the weakest during this period and the hazard of perforation is greatest.

5 FIRE FIGHTING MEASURES

HAZARDOUS COMBUSTION PRODUCTS

Combustion may produce CO_x, SO_x, PO_x, sodium oxides and phosphoxides.

EXTINGUISHING MEDIA

Material itself will not burn.

BASIC FIRE FIGHTING PROCEDURES

Evacuate area and fight fire from a safe distance. Use extinguishing agent suitable for type of surrounding fire.

Use water spray to cool adjacent structures and to protect personnel. 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	None
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 authorities and the National Response Center, if required.

SPILL OR LEAK PROCEDURE

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.

See Exposure Controls/Personal Protection (Section 8).

7 HANDLING & STORAGE

HANDLING

Do not cut, grind, drill, weld in the vicinity of the product or reuse containers unless adequate precautions are taken against these hazards.

Avoid skin or eye contact. Materials should be handled, stored and shipped in a manner to prevent dust evolution.

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

STORAGE

Store in a dry area to prevent caking.

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

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

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. Use appropriate chemical protective gloves when handling.

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

ODORLESS, WHITE POWDER

Boiling Point	ND
Specific Gravity	ND
Melting Point	ND
Percent Volatile	0 %
Vapor Pressure	NA
Vapor Density	NA
Bulk Density	1.1 G/CM3
Solubility in Water	> 10% AT AMBIENT CONDITIONS
Octanol/Water Partn	ND
Volatile Organic	NONE
Pour Point	NA
pH Value	9.5 (1% SOLUTION)
Freezing Point	NA
Viscosity	NA
Evaporation Rate	NA
Molecular Formula	ND
Molecular Weight	ND
Chemical Family	ENZYMATIC DETERGENT
Odor Threshold	ND

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY

Avoid contact with strong acids, strong alkalis, and strong oxidizing substances.

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Decomposes to form toxic fumes of sodium oxide, phosphoxides and sulfoxides.

11 TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

LD50

ND

TOXICOLOGICAL DATA

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

PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

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

12 ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

ND

13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

This product, as supplied, 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.

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.

14 TRANSPORT INFORMATION

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

Non-Regulated

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

Non-Regulated

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 ingredients are on the TSCA inventory or are not required to be 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).

There may be specific regulations at the local, regional or state/provincial level that pertain to this material.

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

CANADA

WHMIS Classification: D2B, E

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.

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

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

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