



MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® ENZYME 10 L**
 CAS NUMBER MIXTURE
 MSDS NUMBER 15
 PRODUCT CODE ND
 PRODUCT USE ENZYME CLEANER
 SYNONYM(S) ND



MANUFACTURER / SUPPLIER Koch Membrane Systems, Inc.
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TELEPHONE NUMBERS - GENERAL ASSISTANCE
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2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Concentration*	Exposure Limits / Health Hazards
PROTEASE ENZYME	ND	< 3 %	ND

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

WHMIS Classification: D2A

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

HEALTH HAZARDS

MAY CAUSE ALLERGIC RESPIRATORY TRACT REACTION (SENSITIZER)

MAY BE IRRITATING TO THE SKIN AND EYES

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

FLAMMABILITY HAZARDS

NON-COMBUSTIBLE

REACTIVITY HAZARDS

STABLE

POTENTIAL HEALTH EFFECTS, SKIN

Repeated or prolonged skin contact may cause reddening, itching and inflammation.

POTENTIAL HEALTH EFFECTS, EYE

May cause eye irritation.

POTENTIAL HEALTH EFFECTS, INHALATION

Exposure to vapor 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.

Contains a component(s) which may cause allergic or asthma-like reactions in certain individuals.

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

POTENTIAL HEALTH EFFECTS, INGESTION

Ingestion of large amounts may cause gastrointestinal disturbances.

4 FIRST AID MEASURES

SKIN

Wash area thoroughly with soap and water. Get medical attention if irritation develops or persists.

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 medical attention if irritation persists.

INHALATION

Remove victim from source of exposure to fresh air. Get medical attention.

INGESTION

Rinse mouth out with water. Do not induce vomiting unless directed by medical personnel. Get medical attention.

5 FIRE FIGHTING MEASURES

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.

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	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.

SPILL OR LEAK PROCEDURE

Avoid clean up procedures that may result in water pollution.

Do not touch or walk through spilled material. Personal safety and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material.

See Exposure Controls/Personal Protection (Section 8).

7 HANDLING & STORAGE

HANDLING

Avoid skin or eye contact. See Exposure Controls / Personal Protection (Section 8).

Do not inhale vapors or mists.

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.

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 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. If skin contact is anticipated, protective clothing, including impervious gloves, should be worn. Protective glove materials include, but are not limited to rubber or polyethylene.

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 LIQUID WITH LITTLE OR NO ODOR

Boiling Point	< 212 °F (100° C)
Specific Gravity	1.009
Melting Point	< 32 °F (0°C)
Percent Volatile	< 80 %
Vapor Pressure	NA
Vapor Density	ND
Bulk Density	8.52 LB/GAL
Solubility in Water	SOLUBLE
Octanol/Water Partn	ND
Volatile Organic	NONE
Pour Point	NA
pH Value	6.8 - 7.2
Freezing Point	< 32 °F (0° C)
Viscosity	ND
Evaporation Rate	NA
Molecular Formula	ND
Molecular Weight	ND
Chemical Family	BIOLOGICAL MIXTURE
Odor Threshold	ND

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY

See precautions under Handling & Storage (Section 7).

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

None known.

11 TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

TOXICOLOGICAL DATA

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

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

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 respiratory system.

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.

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 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: - 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; Propylene glycol, CAS# 57-55-0

INTERNATIONAL REGULATIONS

CANADA

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: D2A

Substances on Ingredient Disclosure List: Propylene glycol (CAS#57-55-0); Boric acid (CAS#10043-35-3)

WHMIS RATINGS

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

NFPA RATINGS

Health	1	Flammability	0	Reactivity	0	Special Hazards
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HMIS RATINGS

* - Indicates chronic health hazard

Health	1*	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.

Current Revision Date 11-Feb-2009

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