



MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® P-10**
 CAS NUMBER MIXTURE
 MSDS NUMBER 48
 PRODUCT CODE ND
 PRODUCT USE MEMBRANE CLEANER
 SYNONYM(S) ND
 MANUFACTURER / SUPPLIER Koch Membrane Systems, Inc.
 850 Main Street
 Wilmington, MA
 01887

TELEPHONE NUMBERS - 24 HOUR ASSISTANCE

Chemtrec: 800-424-9300 (within 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
SODIUM CARBONATE PEROXYHYDRATE	15630-89-4	15 - 40 %	ND
SODIUM PHOSPHATE, TRIBASIC	10101-89-0	15 - 40 %	Total Particulate Dust: 15 mg/m ³ 8-Hour TWA (OSHA) 10 mg/m ³ 8-Hour TWA (ACGIH) Respirable Particulate: 5 mg/m ³ 8-Hour TWA (OSHA) 3 mg/m ³ 8-Hour TWA (ACGIH)
SODIUM CARBONATE	497-19-8	15 - 40 %	ND
SODIUM LAURYL SULFATE	151-21-3	1 - 5 %	ND
ADDITIVES	PROPRIETARY	3 - 7 %	ND

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

The specific identities of some of the components of this product are being withheld as trade secrets. However, all pertinent hazards are addressed in this MSDS.

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER!

HEALTH HAZARDS

MAY BE CORROSIVE TO THE SKIN, EYES AND RESPIRATORY TRACT

MAY CAUSE EYE DAMAGE

MAY CAUSE LUNG DAMAGE

MAY BE HARMFUL OR FATAL IF SWALLOWED

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

FLAMMABILITY HAZARDS

CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE

REACTIVITY HAZARDS

STABLE

POTENTIAL HEALTH EFFECTS, SKIN

Skin contact with wet material may be CORROSIVE. Short term contact may result in tissue destruction and severe burns.

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. Exposure may cause severe burns, destruction of eye tissue and possible permanent injury or blindness.

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

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.

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.

NOTES TO PHYSICIAN

This product is primarily an irritant and corrosive. Signs and symptoms of CNS depression, confusion and convulsions should be considered in the assessment and treatment of victims of exposures. As a corrosive, give attention to potential complications of esophagus or stomach perforations if ingested. Use of emetics and lavage are contraindicated. Necrosis and associated inflammatory processes occur at about 48 hours, but may extend up to four days. Initial healing processes occur during the period 4-14 days, but the esophageal wall is weakest during this period.

If spontaneous vomiting has occurred, the patient should be monitored for symptoms of pneumonitis, as this effect may be delayed up to 48 hours.

5 FIRE FIGHTING MEASURES

HAZARDOUS COMBUSTION PRODUCTS

Decomposes to form irritating vapors.

EXTINGUISHING MEDIA

Material itself will not burn.

BASIC FIRE FIGHTING PROCEDURES

Use extinguishing agent suitable for type of surrounding fire.

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.

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

Flash Point	NA
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, provincial and/or federal authorities, 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

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.

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 acids and metals.

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.

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 FREE FLOWING WHITE GRANULES.

Boiling Point	NA
Specific Gravity	ND
Melting Point	ND
Percent Volatile	NA
Vapor Pressure	NA
Vapor Density	NA
Bulk Density	ND
Solubility in Water	COMPLETE AT 68°F (20°C)
Octanol/Water Partn	ND
Volatile Organic	ND
Pour Point	NA
pH Value	> 10 (1% SOLUTION)
Freezing Point	NA
Viscosity	NA
Evaporation Rate	NA
Molecular Formula	MIXTURE
Molecular Weight	NA
Chemical Family	NA
Odor Threshold	ND

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY

Incompatible with acids and metals. See precautions under Handling & Storage (Section 7).

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Decomposes to form irritating and toxic vapors.

11 TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

LD50

LD50: Sodium phosphate, Rat, Oral, 7.4 g/kg

TOXICOLOGICAL DATA

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

Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: severe gastroenteritis, shock-like state with hypotension and cyanosis and tetany from hypocalcemia. Other symptoms of exposure may include the following: urinary changes and inflammation of the jawbone.

TERATOGENICITY, MUTAGENICITY, OTHER REPRODUCTIVE EFFECTS

Insufficient evidence.

PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

Pre-existing medical conditions which may be aggravated by exposure include disorders of the skin, eyes, kidney 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)

Oxidizing Solid, N.O.S. (sodium carbonate peroxyhydrate), 5.1, UN 1479, PG II

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

Oxidizing Solid, N.O.S. (sodium carbonate peroxyhydrate), 5.1, UN 1479, 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 material, as supplied, contains sodium phosphate, tribasic, a Hazardous Substance as per 40 CFR Part 302.4. The reportable quantity for sodium phosphate, tribasic is 5,000 pound(s). Any release of this material that results in a release of sodium phosphate, tribasic equal to or exceeding the reportable quantity must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR Part 302.6 and 40 CFR 355.40, respectively.

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

NFPA RATINGS

Health 3 Flammability 0 Reactivity 0 Special Hazards

HMIS RATINGS*** - Indicates chronic health hazard**

Health

3*

Flammability

0

Reactivity

0

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 13-Jul-2005

Replaces Sheet Dated 22-Jan-2003

Completed By Safety & Emergency Response, Koch Chemical Technology Group, LLC