



MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

TRADE NAME(S) **KOCHKLEEN® 150**
CAS NUMBER 7631-90-5
MSDS NUMBER 9066
PRODUCT CODE ND
PRODUCT USE MEMBRANE TREATMENT
SYNONYM(S) SODIUM ACID SULFITE



MANUFACTURER / SUPPLIER Koch Membrane Systems, Inc.
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TELEPHONE NUMBERS - 24 HOUR ASSISTANCE

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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 BISULFITE	7631-90-5	30 - 50 %	5 mg/m3 8-Hour TWA (ACGIH)

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

WHMIS Classification: D2A, D2B, E

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER!

HEALTH HAZARDS

IRRITATING TO EYES

RISK OF SERIOUS DAMAGE TO EYES.

MAY BE IRRITATING TO THE RESPIRATORY TRACT

MAY CAUSE AN ALLERGIC REACTION IF INGESTED (SENSITIZER)

MAY CAUSE ALLERGIC RESPIRATORY TRACT REACTION (SENSITIZER)

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

FLAMMABILITY HAZARDS

NON-COMBUSTIBLE

REACTIVITY HAZARDS

STABLE

POTENTIAL HEALTH EFFECTS, SKIN

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

POTENTIAL HEALTH EFFECTS, EYE

MODERATELY TO SEVERELY IRRITATING. May cause conjunctivitis or corneal damage.

POTENTIAL HEALTH EFFECTS, INHALATION

Under normal conditions, inhalation is not expected to be a problem. However, respiratory tract irritation may occur if exposed to fumes or mists.

May cause allergic reactions in some individuals.

POTENTIAL HEALTH EFFECTS, INGESTION

Oral exposure or swallowing may produce gastrointestinal upset, nausea, or vomiting. Ingestion of large doses may be fatal.

May cause allergic reactions in some individuals.

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

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

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 SO_x, sodium monoxide and sodium sulfide.

EXTINGUISHING MEDIA

Material itself will not burn. Use extinguishing agent suitable for type of surrounding 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	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. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire. Evacuate area endangered by release as required. (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

Large spills may be neutralized with dilute alkaline solutions of soda ash or lime. 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 inhale vapors or mists.

Do not use with materials or equipment sensitive to acidic solutions. 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 cool, dry area away from heat and incompatibles. Avoid contact with strong oxidizing agents and acids. Sodium bisulfite is corrosive to metal.

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

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

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.

Use good personal hygiene.

RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)

A NIOSH/MSHA approved air purifying respirator with an acid gas 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

SLIGHTLY CLOUDY, YELLOW LIQUID WITH SULFUR DIOXIDE ODOR

Boiling Point	ND
Specific Gravity	1.298 AT 77 °F (25 °C)
Melting Point	ND
Percent Volatile	50 - 70 %
Vapor Pressure	ND
Vapor Density	ND
Bulk Density	> 10.91
Solubility in Water	COMPLETE
Octanol/Water Partn	ND
Volatile Organic	NA
Pour Point	ND
pH Value	4.8 - 5.1
Freezing Point	ND
Viscosity	ND
Evaporation Rate	ND
Molecular Formula	NaHSO3
Molecular Weight	104.1
Chemical Family	BISULFITE
Odor Threshold	ND

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY

Incompatible with heat, moisture, strong oxidizing agents and acids.

Decomposes at ambient temperature releasing sulfur dioxide gas which may be harmful or deadly when inhaled.

See precautions under Handling & Storage (Section 7).

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS

Combustion may produce SO_x, sodium monoxide and sodium sulfide.

11 TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE

Inhalation, ingestion, skin and eye contact.

LD50

LD50: Sodium Bisulfite Oral Rat 2 g/kg.

TOXICOLOGICAL DATA

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

TERATOGENICITY, MUTAGENICITY, OTHER REPRODUCTIVE EFFECTS

Has been shown to be positive in mutagenicity assays.

Pregnant women may be at an increased risk from exposure.

SENSITIZATION TO MATERIAL

Can cause allergic reactions (including headaches, difficulty breathing, rapid heart rate, anaphylaxis) to susceptible individuals.

PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE

Pre-existing medical conditions which may be aggravated by exposure include asthma or allergies.

12 ECOLOGICAL INFORMATION

CHEMICAL FATE INFORMATION

BOD = 0.12 lb/lb instantaneous.

AQUATIC TOXICITY

Toxicity to Goldfish: LC50 = 100 mg/l (96-hour) (sodium sulfite)

Toxicity to Mosquito fish: TLm = 2600 ppm (24, 48, 96 hour)

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)

Bisulfites, Aqueous Solutions, N.O.S. (sodium bisulfite), 8, UN2693, PG III

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

Bisulfites, Aqueous Solutions, N.O.S. (sodium bisulfite), 8, UN2693, PG III

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 sodium bisulfite, a Hazardous Substance as per 40 CFR Part 302.4. The reportable quantity for sodium bisulfite is 5000 pound(s). Any release of this product that results in a release of sodium bisulfite 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. 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).

This product contains one or more components designated as hazardous substances or toxic pollutants pursuant to the Federal Clean Water Act (40 CFR 116.4 Table A; 40 CFR 401.15). Any unpermitted introduction of this product into a facility stormwater or wastewater discharge may constitute a violation of the Clean Water Act. Facilities must notify the appropriate permitting agency prior to introducing this product into the aforementioned discharges.

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: X

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

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, D2B, E

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 2 Flammability 0 Reactivity 1 Special Hazards

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

Health

2* Flammability

0

Reactivity

1

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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