

# MATERIAL SAFETY DATA SHEET



## I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
**8:00 AM – 5:00 PM CST Monday-Friday:** 785/865-4200  
**NON-BUSINESS HOURS (INFOTRAC):** 800/535-5053

**PRODUCT TRADE NAME:** Enviro Klean<sup>®</sup> BioKlean<sup>™</sup> - Activator

## II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Sodium Hydroxide solution	(Caustic Soda)	1310-73-2	3,0,1,-	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>

## III PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (Air = 1)	EVAPORATION RATE (Butyl Acetate = 1)
Sodium Hydroxide solution	289°F	6.3 (104°F)	Not determined	Not determined

  

	SPECIFIC GRAVITY	pH)	SOLUBILITY IN WATER	APPEARANCE AND ODOR
Enviro Klean <sup>®</sup> BioKlean <sup>™</sup> - Activator	1.584	>13.0	100%	Clear, odorless liquid

## IV FIRE AND EXPLOSION HAZARD DATA

### EMERGENCY OVERVIEW

**POISON! DANGER! CORROSIVE.** MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.

**FLASH POINT (METHOD):** Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.

**FLAMMABLE LIMITS:** Not determined.

**EXTINGUISHING MEDIA:** Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

**SPECIAL FIRE FIGHTING PROCEDURES:** Use NIOSH/MSHA approved self-contained breathing apparatus where this material is involved in a fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Can react with metals such as aluminum, magnesium, copper, zinc, tin, brass or bronze, which will generate hydrogen gas, which is flammable and/or explosive if ignited.

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## V HEALTH HAZARD DATA

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**PRIMARY ROUTES OF EXPOSURE:** Skin, eyes, ingestion.

**CARCINOGEN INFORMATION:** Not listed (OSHA, IARC, NTP).

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

**EFFECTS OF OVEREXPOSURE:** Corrosion of exposed tissues resulting in burns and frequently deep ulcerations. Prolonged contact with dilute solutions has a destructive effect upon tissue.

**EYE CONTACT:** Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

**SKIN CONTACT:** Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

**INHALATION:** Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.

**INGESTION:** Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure. .

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Immediately flush exposed area with water for at least 30 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get immediate medical attention. If physician is not immediately available, continue flushing with water. Do not use chemical antidote.

**SKIN CONTACT:** Immediately flush exposed area with water for at least 15 minutes. Effective removal is indicated by elimination of 'slimy' liquid. Get medical attention. Remove contaminated clothing. Launder contaminated clothing before reuse. Discard contaminated shoes.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

**INGESTION: DO NOT INDUCE VOMITING!** Dilute by giving large amounts of water or milk if immediately available. Give milk of magnesia. If person is unconscious, do not give anything by mouth. Get medical attention immediately.

**NOTE TO PHYSICIAN:** Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

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## VI REACTIVITY DATA

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**STABILITY:** Stable under ordinary conditions of use and storage.

**CONDITIONS TO AVOID:** Heat, moisture, incompatibles.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may causes violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide. Precautions should be taken including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Contact with reactive metals will generate hydrogen gas, which is flammable and/or explosive. Contact with various food sugars may form carbon monoxide.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Wear appropriate protective safety equipment. Dike area to contain and keep from drains. Remove as much of the spill as possible. Dilute the remainder with large amounts of water, then neutralize with dilute acid. Pick up neutralized residual material for disposal. After all visible traces have been removed, flush the area with large amounts of water.

**WASTE DISPOSAL METHODS:** This product component is classified as a hazardous waste under USEPA regulations for the characteristic of corrosivity. When neutralized with an acid, it forms an aqueous salt solution that can be discharged to a sanitary sewer with permission of the receiving facility. In laboratory conditions, standard dilutions of BioKlean™ Cleaner with Activator are effectively neutralized when using BioKlean™ Afterwash at standard dilution. Empty container must be rinsed with water to remove all residue before disposal in a sanitary landfill. Dispose of in a manner approved for this material or in an approved hazardous waste facility. Consult appropriate federal, state, and local regulatory agencies to ascertain proper disposal procedures.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** Sodium hydroxide is generally non-volatile unless heated or present as a mist. If exposure exceeds TLV, NIOSH recommends the use of a full-face respirator with high-efficiency dust/mist filters in the absence of proper environmental control. Respiratory protection program must be in accordance with 29 CFR 1910.134.

**VENTILATION:** Sufficient to maintain airborne concentrations below the Threshold Limit Values TLV(s).

**PROTECTIVE CLOTHING:** Wear protective clothing such as rubber boots, PVC clothing, and plastic headgear as required to prevent skin contact.

**PROTECTIVE GLOVES:** Alkali-resistant such as nitrile rubber, neoprene rubber natural rubber, or PVC.

**EYE PROTECTION:** Close fitting chemical safety goggles and full-face shield. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** Safety shower and eyewash. Personal protective clothing and use of equipment must be in accordance with 29 CFR 1910.133 and 29 CFR 1910.132.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Do not atomize during application. Beware of wind drift. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be prohibited during the use of this product. Wash hands before breaks and at the end of a shift.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Wear appropriate safety equipment and clothing. Do not get in eyes, on skin, or on clothing. Do not take internally.

Avoid breathing mist. Store in a cool, dry, well-ventilated place. Separate from acids, explosives, organic peroxides, and easily ignitable materials.

Keep containers tightly closed when not dispensing product. Use care around spilled material because it will be slippery. Never touch eyes or face with hands or gloves that may be contaminated with this product. Treat empty containers as if they were full.

**OTHER PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Can cause severe injury or blindness. Do not breathe mist. Do not take internally. Wash thoroughly after handling. Do not eat, drink, or smoke in work areas.

**Comments:** Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed vessels and can cause death.

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**X REGULATORY INFORMATION**

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**SHIPPING:** When shipped in unopened, factory combination packaging, this product carries the proper shipping description '**Sodium Hydroxide Solution, 8, UN1824, II**'.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** NMFC#: 48580 Sub 3 Class Rate: 55

**SARA 313 REPORTABLE:**

<b>CHEMICAL NAME</b>	<b>CAS</b>	<b>UPPERBOUND CONCENTRATION % BY WEIGHT</b>
NA		

**CALIFORNIA PROPOSITION 65:** Product components not listed under California 65.

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**XI OTHER**

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**MSDS Status:** **Date of Revision:** August 1, 2001  
**For Product Manufactured After:** N/A – no change in formulation.  
**Changes:** Updated every section in this MSDS as a result of scheduled technical review.  
**Item #:** 41042  
**Approved By:** Regulatory Department

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**DISCLAIMER:**

The information contained on the Material Safety Data Sheet has been compiled from data considered accurate. This data is believed to be reliable, but it must be pointed out that values for certain properties are known to vary from source to source. PROSOCO, Inc. expressly disclaims any warranty expressed or implied as well as any liability for any injury or loss arising from the use of this information or the materials described. This data is not to be construed as absolutely complete since additional data may be desirable when particular conditions or circumstances exist. It is the responsibility of the user to determine the best precautions necessary for the safe handling and use of this product for his unique application. This data relates only to the specific material designated and is not to be used in combination with any other material. Many federal and state regulations pertain directly or indirectly to the product's end use and disposal of containers and unused material. It is the purchaser's responsibility to familiarize himself with all applicable regulations.

**DATE OF PREPARATION:** August 1, 2001