

# 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® EK Restoration Cleaner

## II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Glycolic Acid	(Hydroxyacetic Acid)	79-14-1	3,0,0,-	Not listed	Not listed
Ammonium Bifluoride	(Ammonium Difluoride)	1341-49-7	3,0,2,-	2.5 mg(F)/m3	2.5 mg(F)/m3
Cocoamido Betaine	Betaine Derivative	61789-40-0	1,1,0,-	Not listed	Not listed
Lauryl Dimethyl Amine Oxide	Amine Oxide	1643-20-5	1,1,0,-	Not listed	Not listed

## III PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (Air = 1)	EVAPORATION RATE (Butyl Acetate = 1)
Glycolic Acid	212°F	17.5 (68°F)	N/D	N/D
Ammonium Bifluoride	464°F	N/A	N/A	N/A
Cocoamido Betaine	212°F	N/D	<1	< ethyl ether (estimated)
Lauryl Dimethyl Amine Oxide	212°F	N/D	<1	< ethyl ether (estimated)

  

	SPECIFIC GRAVITY	pH	SOLUBILITY IN WATER	APPEARANCE AND ODOR
EK Restoration Cleaner	1.06	5.5	Complete	Clear gelled liquid, mild odor

## IV FIRE AND EXPLOSION HAZARD DATA

### EMERGENCY OVERVIEW

**Danger!** Enviro Klean® EK Restoration Cleaner may be fatal if swallowed. Product affects respiratory system, heart, skeleton, circulatory system, central nervous system and kidneys. Causes irritation and burns to skin, eyes and respiratory tract. Irritation and burn effects may be delayed. Harmful if absorbed through skin. Near neutral pH of the product limits initial acute injuries, however, untreated exposures may cause fluoride type burns. Large-scale contacts or ingestion may cause systemic fluoride poisoning. Avoid atomizing during application. Contact with metals in poorly ventilated spaces may generate dangerous concentrations of hydrogen gas.

**FLASH POINT (METHOD):** N/D

**FLAMMABLE LIMITS:** No applicable information found.

**EXTINGUISHING MEDIA:** As appropriate for combustibles in area.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode and full body protective clothing when fighting fires. Toxic emissions may be released if this product is involved in a fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Contact with metal may evolve flammable hydrogen gas. Hydrogen fluoride gas and ammonia may be released if product is involved in a fire.

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## V HEALTH HAZARD DATA

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

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

**EFFECTS OF OVER EXPOSURE:** Causes severe damage to eyes. Causes burns to skin. Breathing of mist can damage nasal and respiratory passages. Swallowing results in damage to mucous membranes and deep tissue; can result in death on penetration to vital areas. Bronchitis, pulmonary edema and chemical pneumonitis may occur from inhalation of vapors or mists. This product can cause fluoride poisoning.

**EYE CONTACT:** May be extremely irritating with possible burnsto eye tissue and permanent eye damage may result. Eye contact may also cause eye corrosion with corneal or conjunctival ulceration.

**SKIN CONTACT:** Prolonged or incidental contact can causes irritation, burns,and ulceration to the skin. Effects may not appear immediately.

**INHALATION:** Vapors and mists may cause irritation and burns to respiratory tract, symptoms may include coughing, sore throat, and labored breathing. May be absorbed through inhalation of mist, symptoms may parallel those from ingestion exposure. Irritation and burning effects may not appear immediately.

**INGESTION:** May cause salivation, nausea, vomiting, diarrhea, and abdominal pain, followed by symptoms of weakness, tremors shallow respiration, carpedal spasm, convulsions, and coma. May cause brain and kidney damage. Affects heart and circulatory system. Death may be caused by respiratory paralysis.

**CHRONIC EXPOSURE:** Chronic exposure may cause mottling of teeth and bone damage (osteosclerosis) and fluorosis. Symptoms of fluorosis include brittle bones, weight loss, anemia, calcified ligaments, general ill health and joint stiffness.

**AGGRAVATION OF PRE-EXISTING CONDITIONS:** Populations that appear to be at risk from the effects of fluoride are individuals that suffer from diabetes insipidus or some forms of renal impairment.

**EMERGENCY AND FIRST AID PROCEDURES: First aid procedures should be pre-planned for fluoride compound emergencies.**

**EYE CONTACT:** Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. GET MEDICAL ATTENTION IMMEDIATELY- Preferably an eye specialist. Irrigate with 1% calcium gluconate in normal saline for 1-2 hours.

**SKIN CONTACT:** Immediately flush skin with large amounts of water for a minimum of 15 minutes. Remove contaminated clothing and shoes. Wash clothing before re-use. Promptly apply a 2.5% calcium gluconate gel and continuously massage into the skin until pain is relieved. Symptoms of exposure may not show up immediately. CALL A PHYSICIAN IMMEDIATELY.

**INHALATION:** If suffering inhalation symptoms such as mouth or respiratory irritation remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. CALL A PHYSICIAN IMMEDIATELY.

**INGESTION:** DO NOT INDUCE VOMITTING. Administer milk, chewable calcium carbonate tablets or milk of magnesia. Never give anything by mouth to an unconscious person. CALL A PHYSICIAN IMMEDIATELY.

**NOTE TO PHYSICIAN:** Treat as appropriate for symptoms of fluoride exposure and monitor for systemic fluoride poisoning. Symptoms may be delayed up to 24 hours. For ingestion and exposures over large areas of skin, system effects (hypocalcaemia and hypomagnesia) may occur. Monitor and correct for hypocalcaemia, cardiac arrhythmias, hypomagnesemia and hyperkalemia.

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## VI REACTIVITY DATA

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

**CONDITIONS TO AVOID:** Extreme temperatures, as well as contact with strong acids and strong bases.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Reacts with acids to liberate hydrogen fluoride and base to liberate ammonia. Will corrode glass, cement, and most metals.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Emits toxic fumes of hydrogen fluoride, nitric oxides, and ammonia when heated to decomposition. Upon contact with metal, this material may release hydrogen gas.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Provide adequate ventilation. Evacuate immediate area where concentrated fumes are present. Clean up personnel must wear proper protective equipment. Contain spilled material with dikes, etc., and prevent runoff into ground and surface waters or into sewers.

Spills and leaks should be diluted with copious quantities of water and neutralized by adding dry soda ash or lime over the affected area to adjust pH as needed. Allow powdered material to remain on spill for five to ten minutes and flush thoroughly with water. Neutralized material, both liquid and solid, should be recovered for proper disposal.

**WASTE DISPOSAL METHODS:** Neutralized materials may be discharged to a sanitary sewer with approval of local sewerage authorities. Product as supplied has a pH of 5.5 and meets pretreatment standards in most regions, although minor pH adjustment may be required depending on local restrictions. The primary active ingredient, ammonium bifluoride, is commonly used as an additive source of fluoride in drinking water supplies. Recovered solids or liquids may be sent to a licensed reclaimer or disposed of in a permitted waste management facility. Consult federal, state, and/or local authorities for approved procedure.

**NOTE:** Empty containers must be triple rinsed with water before disposal in a sanitary landfill. Neutralize rinse water before disposal.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** The ingredients in this product have low vapor pressures and are not likely to contribute to airborne exposures unless heated or atomized. Some ammonia may be liberated during the product dwell time on the substrate. If the exposure limit for fluoride is exceeded, a NIOSH approved half-mask respirator with acid gas cartridges may be worn for up to ten times the exposure limit. For ammonia, use a half-mask respirator with ammonia specific cartridges. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. Use a NIOSH approved dust/mist respirator whenever mists are present to avoid respiratory tract exposure.  
**NOTE:** Fluoride is considered to have good warning properties and has odor and irritation thresholds below 1 ppm in air.

**VENTILATION:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**PROTECTIVE CLOTHING:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**PROTECTIVE GLOVES:** Rubber or neoprene gloves.

**EYE PROTECTION:** Use chemical splash resistant safety goggles and/or full-face shield. Maintain eye wash fountain and quick-drench facilities in work area.

**OTHER PROTECTIVE EQUIPMENT:** An eyewash and safety shower should be nearby and ready for use.

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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. Application equipment should be of acid resistant construction. Do not atomize during application. Beware of wind drift. Pre-rinsing with low pressure prior to pressure washing helps minimize wind drift concerns. 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. Do not alter, dilute or use the product for purposes other than specified.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep in tightly closed container. Store in cool, dry ventilated area. Protect against physical damage. Separate from acids and alkalis. Do not store in metal containers, as contact with moisture and metal at the same time may release flammable hydrogen gas. Containers of this material may be hazardous when empty since they retain product residues; observe all warnings and precautions listed for the product.

**OTHER PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Can cause injury or blindness. Avoid breathing mist or vapor. Provide ventilation sufficient to limit employee exposure below OSHA permissible limit. Do not take internally. Wash thoroughly after handling. Empty containers should be treated as if they were full.

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## X REGULATORY INFORMATION

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**SHIPPING:** This product carries the proper shipping description **UN2922, Corrosive Liquid, Toxic, N.O.S. (Ammonium Bifluoride And Hydroxyacetic Acid), 8(6.1), III** in domestic or international shipment.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** NMFC #: 45615 Sub 5      Class Rate: 92.5

**SARA 313 REPORTABLE:**

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
NA		

**CALIFORNIA PROPOSITION 65:**      Contains no chemicals listed under California's Proposition 65.

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## XI OTHER

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**MSDS Status:**      **Date of Revision:** April 16, 2007  
**For Product Manufactured After:** N/A – no change in formulation.  
**Changes:** Updated Shipping Description (Section X) for DOT Regulation Compliance  
**Item #:** 41006  
**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 express 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:** April 16, 2007