SAFETY DATA SHEET

1. Identification

Product identifier K1 Prewash

Other means of identification

SDS number #9

Recommended use For use within surface cleaning applications.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Bioclean System and Supply, Inc

Address 10621 Nassau Street NE
Blaine, MN 55449
United States

Main Telephone Number 763-231-4405

Website www.biocleansystems.com

E-mail info@biocleansystems.com

Emergency #: INFOTRAC 1-800-535-5053

Emergency #: INFOTRAC 1-352-323-3500 (call collect)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 3
Acute toxicity, inhalation	Category 2
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A

Label elements

Signal word Danger

Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. Toxic if swallowed or inhaled.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse.
Storage	Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in accordance with local/regional/national/international regulations.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sulfuric Acid		7664-93-9	5 - 15
Ammonium BiFlouride		1341-49-7	0 - 5
Citric Acid		77-92-9	0 - 5
Alcohol, ethoxylate		68439-46-3	0 - 5
Other components below reportable levels			5 - < 10

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Apply and massage 2.5% calcium gluconate gel. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain, blistering, and corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed and are dependant on exposure.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Foam. Water spray.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water. Should not be released into the environment.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sulfuric Acid (CAS 7664-93-9)	PEL	1 mg/m3
Ammonium BiFlouride (CAS 1341-49-7)	TWA	2.5mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sulfuric Acid (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.
Ammonium BiFlouride (CAS 1341-49-7)	TWA	2.5 mg.m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sulfuric Acid (CAS 7664-93-9)	TWA	1 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.

Individual protection measures, such as personal protective equipment

Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Strong, sulfur smell.
Odor threshold	Not available.
pH	2.0
Freezing point	32 °F (0 °C)
Boiling point	212 °F (100 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	Not available.
Dynamic viscosity	Not available.
Dynamic viscosity temperature	Not available.

Kinematic viscosity	Not available.
Molecular formula	Not available.
Molecular weight	Not available.
Specific gravity	1.10

10. Stability and reactivity

Reactivity	Reacts with strong alkaline substances. This product may react with reducing agents. Material is stable under normal conditions.
Chemical stability	
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Do not mix with other chemicals. Contact with incompatible materials. Avoid heat, flames and sparks.
Incompatible materials	Bases. Reducing agents. Metals. Alkalies. Oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. Hydrogen gas. Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Material is extrememly destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin contact	Causes severe skin burns, blistering, and pain.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity May cause respiratory irritation.

Product	Species	Test Results
Sulfuric Acid 93%		
Acute		
Inhalation		
LC50	Guinea pig	0.0193 mg/l, 8 Hours estimated
	Rat	372 mg/l, 1 Hours estimated
Oral		
LD50	Rat	2296 mg/kg estimated

Components	Species	Test Results
Sulfuric Acid (CAS 7664-93-9)		
Acute		
Inhalation		
LC50	Guinea pig	0.018 mg/l, 8 Hours
	Rat	347 mg/l, 1 Hours
Oral		
LD50	Rat	2140 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns and eye damage. May cause hypocalcemia (calcium loss) if absorbed through skin. Get immediate medical attention.
Serious eye damage/eye irritation	Causes serious irreversible eye damage.

Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	No data available.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	No data available.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1760
UN proper shipping name	Corrosive Liquid, n.o.s. (Ammonium BiFlouride, Sulfuric Acid), 8, II
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	None
Packaging non bulk	201
Packaging bulk	243

IATA

UN number	UN1760
UN proper shipping name	Corrosive Liquid, n.o.s. (Ammonium BiFlouride, Sulfuric Acid), 8, II
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1760
UN proper shipping name	Corrosive Liquid, n.o.s. (Ammonium BiFlouride, Sulfuric Acid), 8, II
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

DOT

IATA; IMDG

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sulfuric Acid (CAS 7664-93-9)	Listed.
Ammonium BiFlouride(CAS 1341-49-7)	Listed.

SARA 304 Emergency release notification

Sulfuric Acid (CAS 7664-93-9)	1000 LBS
Ammonium BiFlouride (CAS 1341-49-7)	100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 302 Extremely hazardous substance Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Sulfuric Acid	7664-93-9	1000	1000 lbs		
Ammonium BiFlouride	1341-49-7	100			

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Sulfuric Acid	7664-93-9	5 - 15
Ammonium BiFlouride	1341-49-7	1 - 10

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US - California Candidate Chemicals: Listed on initial list

Sulfuric Acid (CAS 7664-93-9)

Ammonium BiFlouride (CAS 1341-49-7)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Sulfuric Acid (CAS 7664-93-9)

Ammonium BiFlouride CAS 1341-49-7)

US. New Jersey Worker and Community Right-to-Know Act

Sulfuric Acid (CAS 7664-93-9)

Ammonium BiFlouride (CAS 1341-49-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Sulfuric Acid (CAS 7664-93-9)

Ammonium BiFlouride (CAS 1341-49-7)

US. Rhode Island RTK

Sulfuric Acid (CAS 7664-93-9)

Ammonium BiFlouride (CAS 1341-49-7)

16. Other information, including date of preparation or last revision

Issue date	03-09-2015
Revision date	05-19-2015
Version #	04

Disclaimer

Bioclean Systems Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Bioclean Systems Inc., provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Bioclean Systems Inc., knows of no medical condition, other than those noted on this Material Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.

Revision Information

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