

**1. Identification**

**Product identifier** K1 Parts A and C Drumpak  
**Other means of identification**  
**SDS number** #2  
**Recommended use** For use within Bioclean detergent cleaning solutions only.  
**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  
Skin corrosion Category 1B  
Serious eye damage/eye irritation Category 1

**OSHA defined hazards** Toxic by ingestion, Corrosive

**Label elements****Signal word**

Danger

**Hazard statement**

Toxic if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

**Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/mist/vapor/spray. 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. Do not eat, drink, or smoke when using this product.

<b>Response</b>	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.
<b>Storage</b>	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.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ammonium BiFlouride		1341-49-7	35 - 55
Citric Acid		77-92-9	20 - 35
Alcohol, ethoxylate		68439-46-3	20 - 35

\*Percentage ranges of composition to protect confidentiality or due to batch variation

### 4. First-aid measures

<b>Inhalation</b>	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.
<b>Skin contact</b>	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. Wash contaminated clothing before reuse.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms/effects, acute and delayed</b>	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.
<b>Indication of immediate medical attention and special treatment needed</b>	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.
<b>General information</b>	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

<b>Suitable extinguishing media</b>	Water spray. Alcohol resistant foam. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Not available
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. Nitrogen Oxides or Hydrogen flouride may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Use spark-proof tools and explosion-proof equipment.
<b>Specific methods</b>	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**

Do not let product enter drains. Should not be released into the environment.

Large Spills: Stop the flow of material, if this is without risk. Sweep up and shovel. Clean surface thoroughly to remove residual contamination. Keep in suitable, closed containers for disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Sweep up and shovel. Clean surface thoroughly to remove residual contamination. Keep in suitable, closed containers for disposal.

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 formation of dust. 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 cool, dry and well-ventilated place. Hygroscopic material. 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
Ammonium BiFlouride CAS 1341-49-7	TWA	2.5 mg/m3

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Ammonium BiFlouride CAS 1341-49-7	TWA	2.5 mg/m3	Bone Damage

**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

<b>Eye/face protection</b>	Chemical respirator with organic vapor cartridge and full facepiece. Safety glasses are also recommended.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Gloves must be inspected prior to use. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Thermal hazards</b>	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

<b>Physical state</b>	White solid.
<b>Form</b>	White crystalline.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	257 °F (125 °C)
<b>Initial boiling point and boiling range</b>	
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	1.08 Pa at 25 °C
<b>Vapor density</b>	Not Available.
<b>Relative density</b>	1.500 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	602g/ at 20 C
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	Not available.
<b>Dynamic viscosity</b>	Not available
<b>Dynamic viscosity temperature</b>	Not available.

<b>Kinematic viscosity</b>	Not available.
<b>Molecular formula</b>	Not available.
<b>Molecular weight</b>	Not available.
<b>Specific gravity</b>	Not available.

## 10. Stability and reactivity

<b>Reactivity</b>	Reacts violently with strong alkaline substances. This product may react with reducing agents.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Do not mix with other chemicals. Contact with incompatible materials.
<b>Incompatible materials</b>	Bases. Reducing agents. Metals. Alkalies.
<b>Hazardous decomposition products</b>	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 extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin contact** Causes severe skin burns. May be harmful if absorbed through skin.

**Eye contact** Causes serious eye damage.

**Ingestion** Causes digestive tract burns. Toxic if swallowed.

**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** Possibly fatal if inhaled. May cause respiratory irritation.

### Acute toxicity

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

**Respiratory or skin sensitization****Respiratory sensitization** Not available.**Skin sensitization** Not available.**Germ cell mutagenicity** Not available.**Carcinogenicity** Not available.**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not available.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not available.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not available.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.**Specific target organ toxicity - single exposure** Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.**Specific target organ toxicity - repeated exposure** Not available.**Aspiration hazard** Not available.**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.**12. Ecological information****Ecotoxicity** Not 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**

<b>UN number</b>	UN1759
<b>UN proper shipping name</b>	Corrosive Solids, n.o.s.(Ammonium Biflouride)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	128, IB8, IP2, IP4, T3, TP33
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	212
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN1759
<b>UN proper shipping name</b>	Corrosive Solids, n.o.s.(Ammonium Biflouride)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

**IMDG**

<b>UN number</b>	UN1759
<b>UN proper shipping name</b>	Corrosive Solids, n.o.s.(Ammonium Biflouride)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	Not available.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.

DOT



IATA; IMDG



### 15. Regulatory information

#### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonium Bifluoride (CAS 1341-49-7) Listed.

#### SARA 304 Emergency release notification

Ammonium Bifluoride (CAS 1341-49-7) 100 LBS

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Hazard categories

Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
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Ammonium Bifluoride 1341-49-7 100 lbs

SARA 311/312 Hazardous chemical Yes

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ammonium Bifluoride	1341-49-7	50

#### Other federal regulations

##### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

##### Safe Drinking Water Act(SDWA)

Not regulated.



## US state regulations

### US - California Candidate Chemicals: Listed on initial list

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

Ammonium Biflouride (CAS 1341-49-7)

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

Ammonium Biflouride (CAS 1341-49-7)

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

Ammonium Biflouride (CAS 1341-49-7)

### US. Rhode Island RTK

Ammonium Biflouride (CAS 1341-49-7)

### US. California Proposition 65

Not Available.

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

**Issue date** 04-09-2015

**Revision date** 05-01-2017

**HMIS® ratings**

Health: 3\*  
Flammability: 0  
Physical hazard: 0  
Personal protection:

**NFPA ratings**

Health: 3  
Flammability: 0  
Instability: 0  
Special hazards:

**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**

**Issue date: 04-09-2015**  
**Revision date: 05-13-2019**