Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 04/01/2018 Reviewed on 6/26/2025

1 Identification

· **Product Identifier**

· **Trade Name: CLEAN-ALL**
· **Product Number:** K-CAA
· **Relevant identified uses of the substance or mixture and uses advised against:**
· **Product Description:** Acid cleaner
· **Application of the substance / the mixture:** Tunnel Wall Cleaner

· **Details of the Supplier of the Safety Data Sheet:**
· **Manufacturer/Supplier:**
Kaady Chemical Corp.
2545 SW SPRING GARDEN ST STE 120
PORTLAND, OR 97219
1-510-562-9788
www.kaadychemical.com
· **Emergency telephone number:** +1-800-424-9300

2 Hazard(s) Identification

· **Classification of the substance or mixture:**

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

GHS05 Corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

GHS07

STOT SE 3 H335 May cause respiratory irritation.

· **Label elements:**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS05 GHS06 GHS07

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Ammonium Bifluoride
· **Hazard statements:**
H301 Toxic if swallowed.

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H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

· **Precautionary statements:**

P260	Do not breathe dust.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves / eye protection / face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
20 % of the mixture consists of component(s) of unknown toxicity.

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 3
Fire = 0
Physical Hazard = 0

· **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

· **Non-hazardous components:**

Non-Hazardous Components	>80%

· **Chemical characterization: Mixtures**
· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

CAS: 1341-49-7 RTECS: BQ 9200000	Ammonium Bifluoride Acute Tox. 3, H301; Skin Corr. 1B, H314	15-20%

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· **Additional information:**
The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

· **Description of first aid measures:**
· **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. Give oxygen or artificial respiration if needed. Lie victim down in the recovery position; cover to keep warm.
· **After skin contact:**
Remove contaminated clothing immediately; wash before reuse. Promptly flush skin with water until all chemical is removed. Immediately apply calcium gluconate gel, 2.5%, and massage into the affected areausing rubber gloves. Continue to massage while repeatedly applying gel until 15 minutes after pain is relieved. If fingers/finger nails are touched, even if there is not pain, dip them in a bath of 5% calcium gluconate for 15 to 20 minutes. Get medical attention if needed.
· **After eye contact:**
Get immediate medical attention. Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Rinse to eyes with a calcium gluconate, 1%, solution in physiological serum (10 ml of calcium gluconate 10% in 90 ml of physiological serum). In the case of difficulty of opening eyelids, administer an analgesic eye wash (oxybuprocaine).
· **After swallowing:**
Call a physician immediately. Take victim immediately to hospital.
If victim is conscious: If swallowed, rinse mouth with water (only if the person is conscious). Give to drink a 1% aqueous calcium gluconate solution. Do NOT induce vomiting. Artificial respiration and/or oxygen may be necessary.
If victim in unconscious, but breathing:
Artificial respiration and/or oxygen may be necessary.
· **Information for doctor:**
Exposure to decomposition products: HF-Antidote Gel from IPS Healthcare is recommended as treatment for injuries from hydrofluoric acid. Immediately apply calcium gluconate gel, 2.5%, and massage into the affected area using rubber gloves; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved.
· **Most important symptoms and effects, both acute and delayed:**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-Fighting Measures

· **Extinguishing media:**
· **Suitable extinguishing agents:**
CO2, sand, dry chemical, water mist or alcohol resistant foam.
Use fire fighting measures that suit the environment.

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· **For safety reasons unsuitable extinguishing agents:** No further relevant information.
· **Special hazards arising from the substance or mixture:**
Nitrogen oxides (NOx)
Hydrogen fluoride
· **Advice for firefighters:**
· **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures:**
Use personal protective equipment.
Keep from contacting skin or eyes.
Avoid breathing vapors, mist or gas; use self-contained breathing apparatus if necessary. Ensure adequate ventilation.
Evacuate personnel to safe areas.
· **Environmental precautions:** Dilute with plenty of water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
1341-49-7	Ammonium Bifluoride	11 mg/m³
· **PAC-2:**		
1341-49-7	Ammonium Bifluoride	130 mg/m³
· **PAC-3:**		
1341-49-7	Ammonium Bifluoride	750 mg/m³

7 Handling and Storage

· **Handling**
· **Precautions for safe handling:**
Avoid breathing vapors or mist.
Avoid contact with eyes, skin, or clothing.
Use approved, plastic containers only.
Do not use corrosive-sensitive materials for handling material.
Do not use Silicate containing materials for handling material (glass, cement, etc.).
Keep containers closed when not in use.
Do not expose containers to open flame, excessive heat, or direct sunlight.
Do not puncture or drop containers.

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Handle with care and avoid spillage on the floor (slippage).
Keep material out of reach of children.
Keep material away from incompatible materials.
Wash thoroughly after handling.
· ***Information about protection against explosions and fires:*** *No special measures required.*

· ***Conditions for safe storage, including any incompatibilities:***
· ***Storage***
· ***Requirements to be met by storerooms and receptacles:*** *No special requirements.*
· ***Information about storage in one common storage facility:***
Keep container tightly closed.
Store away from strong acids.
Store away from strong bases.
Store away from strong oxidizers.
Store away from Silicate containing material (glass, cement, etc.).
Store away from metals.
· ***Further information about storage conditions:*** *None.*
· ***Specific end use(s):*** *No further relevant information available.*

8 Exposure Controls/Personal Protection

· ***Additional information about design of technical systems:*** *No further data; see section 7.*

· ***Control parameters:***
· ***Components with occupational exposure limits:***
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· ***Additional information:*** *The lists that were valid during the creation of this SDS were used as basis.*

· ***Exposure controls:***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
· ***Breathing equipment:***
Have self-contained breathing apparatus, positive pressure, MSHA/NIOSH (approved or equivalent) available in case of spillage or equipment failure.
· ***Protection of hands:***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Select glove material based on penetration times, rates of diffusion and degradation.
· ***Material of gloves:***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several

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substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Neoprene, Nitrile or Buma Rubber.

· **Penetration time of glove material:**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**

Safety glasses with side shields

· **Body protection:**

Apron

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Clear, Colorleess
· **Odour:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value @ 20 °C (68 °F):**	3.0
· **Change in condition**	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	Not determined.
· **Flash point:**	None
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	Not applicable
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not determined.
· **Density @ 20 °C (68 °F):**	1.078 g/cm³ (8.996 lbs/gal)

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· **Relative density:**	Not determined.
· **Vapor density:**	Not determined.
· **Evaporation rate:**	Not determined.
· **Solubility in / Miscibility with:**	
Water:	Fully Soluble
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
VOC content:	<1 %
· **Other information:**	No further relevant information available.

10 Stability and Reactivity

· **Reactivity:** No further relevant information available.
· **Chemical stability:**
Product is stable under normal recommended storage conditions. Corrosive action on some metals. Gives off Hydrogen by reaction with metals.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions:** No dangerous reactions known.
· **Conditions to avoid:** Incompatibilities, flames, ignition sources.
· **Incompatible materials:**
Peroxides, Nitric Acid, Strong Oxidizing Agents, Strong Acids, Strong Bases, Silicate containing material (glass, cement, etc.) and metals.
· **Hazardous decomposition products:** Hydrogen Fluoride, Nitrogen Oxides (NOx).

11 Toxicological Information

· **Information on toxicological effects:**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
1341-49-7 Ammonium Bifluoride		
Oral	LD50	60-130 mg/kg (Rat)

· **Primary irritant effect:**
· **On the skin:** No irritating effect.
· **On the eye:** No irritating effect.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic

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· **Carcinogenic categories:**
· **IARC (International Agency for Research on Cancer):**
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans
Group 2B - Possibly carcinogenic to humans
Group 3 - Not classifiable as to its carcinogenicity to humans
Group 4 - Probably not carcinogenic to humans

1341-49-7	Ammonium Bifluoride	3

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

1341-49-7 Ammonium Bifluoride

EC50	43 mg/l (Green algae) As Fluorides 97 mg/l (Water flea)

· **Persistence and degradability:** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

· **Waste treatment methods:**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

*

14 Transport Information

· **UN-Number:**	
· **DOT, ADR/ADN, IMDG, IATA**	UN2817
· **UN proper shipping name:**	
· **DOT**	Ammonium hydrogendifluoride, solution
· **ADR/ADN**	UN2817 Ammonium hydrogendifluoride, solution
· **IMDG, IATA**	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
· **Transport hazard class(es):**	
· **DOT**	

· **Class:**	8 Corrosive substances
· **Label:**	8, 6.1
· **ADR/ADN**	

· **Class:**	8 (CT1) Corrosive substances
· **Label:**	8+6.1
· **IMDG**	

· **Class:**	8 Corrosive substances
· **Label:**	8/6.1
· **IATA**	

· **Class:**	8 Corrosive substances
· **Label:**	8 (6.1)

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· **Packing group:**	
· **DOT, ADR/ADN, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user:**	Warning: Corrosive substances
· **Danger code (Kemler):**	86
· **EMS Number:**	F-A,S-B
· **Segregation groups:**	Acids, ammonium compounds
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations:**	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· **ADR/ADN**	
· **Excepted quantities (EQ):**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **IMDG**	
· **Limited quantities (LQ):**	1L
· **Excepted quantities (EQ):**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 2817 AMMONIUM HYDROGENDIFLUORIDE, SOLUTION, 8 (6.1), II

15 Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**
1341-49-7 Ammonium Bifluoride

· **California Proposition 65:**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

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· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

1341-49-7	Ammonium Bifluoride

· **New Jersey Special Hazardous Substance List:**

1341-49-7	Ammonium Bifluoride	CO

· **Pennsylvania Right-to-Know List:**

1341-49-7	Ammonium Bifluoride

· **Pennsylvania Special Hazardous Substance List:**

1341-49-7	Ammonium Bifluoride	E

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**
None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**

1341-49-7	Ammonium Bifluoride	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**
None of the ingredients are listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**

GHS05 GHS06 GHS07

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Ammonium Bifluoride

· **Hazard statements:**
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

· **Precautionary statements:**

P260	Do not breathe dust.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves / eye protection / face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

None of the ingredients are listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 04/01/2018 / 20

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· *** Data compared to the previous version altered.**

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