



# BAY CLEANER PLUS

## Safety Data Sheet

Revision date: May 19, 2015

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name : BAY CLEANER PLUS  
Product form : Mixture  
Product code : 10-70058  
MFG code AC-50.01

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Acidic Detergent

#### 1.3. Details of the supplier of the safety data sheet

ChemQuest Inc.  
21365 Hamburg Ave.  
Lakeville, MN 55044  
Phone: (877) 437-3478  
Email: infocq@chemquestinc.com

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

<u>Hazard Code</u>	<u>Hazard Class</u>	<u>Hazard Category</u>
H301	Acute toxicity, oral	3
H310	Acute toxicity, dermal	2
H314	Skin corrosion/irritation	1B
H332	Acute toxicity, inhalation	4

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES

#### 2.2. Label elements

##### GHS-US labeling

##### Hazard pictograms (GHS-US)



Signal Word (GHS-US): **Danger**

##### Hazard Statements (GHS-US):

H301: Toxic if swallowed  
H310: Fatal in contact with skin  
H314: Causes severe skin burns and eye damage  
H332: Harmful if inhaled

##### Precautionary statements (GHS-US):

P260: Do not breathe dust/fumes/gas/mist/vapors/spray  
P262: Do not get in eyes, on skin, or on clothing  
P264: Wash thoroughly after handling  
P270: Do not eat, drink or smoke when using this product  
P271: Use only outdoors or in a well-ventilated area  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P310: Immediately call a POISON CENTER or doctor/physician  
P321: Specific treatment (see SECTION 4)  
P322: Specific measures (see SECTION 4)  
P330: Rinse mouth

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P361: Remove/Take off immediately all contaminated clothing  
P363: Wash contaminated clothing before reuse  
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P405: Store locked up  
P501: Dispose of contents/container in accordance with local, state and federal authorities.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	CAS #	%
Hydrogen chloride	7647-01-0	1 - 5
Citric Acid	77-92-9	1 - 5
Ammonium Hydrogen Fluoride	1341-49-7	< 3.5
Hydrofluoric Acid (Estimated from after ABF dissolved in water)	7664-39-3	< 2

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : IF ON SKIN: Flush with large amounts of water. Treat exposed area with calcium gluconate 2.5% gel. Get prompt medical attention.

First-aid measures after eye contact : IF IN EYES: Flush with water for 15 minutes while holding eyelids open. Irrigate with calcium gluconate 1% saline solution. Get prompt medical attention.

First-aid measures after ingestion : IF SWALLOWED: Do not induce vomiting. If patient is conscious: drink large amounts of calcium based antacid, milk or milk by product or water in this order. Get prompt medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Can be absorbed through the skin or swallowed. CORROSIVE to the nose, throat, respiratory tract, eyes and skin. Causes lung injury-effects may be delayed. Causes severe burns. May cause blindness and permanent scarring. Absorbed fluoride can cause metabolic imbalances with irregular heartbeat, nausea, dizziness, vomiting and seizures. Long-term exposure may cause skeletal fluorosis (weakened bone structure).

Symptoms/injuries after inhalation : May cause headache, nausea and irritation or burns of respiratory tract.

Symptoms/injuries after skin contact : May be fatal if absorbed through skin and penetration may continue for several days. Extremely corrosive and can cause very deep and excruciatingly painful burns and tissue loss. Can penetrate deeply before causing tissue damage and surface involvement may be minimal. Burns are swollen, hot and painful, then develop white or yellowish areas and blistering, with deep ulceration and destruction of tissue, which tends to heal slowly. The severity of the burns and absorption of the acid (with liquefaction necrosis of soft tissue and decalcification and corrosion of the bone) have resulted in permanent scarring, disability and death.

Symptoms/injuries after eye contact : Direct contact with hydrofluoric acid can cause severe and irreversible corrosive injury with possible corneal scarring and blindness. The acid penetrates to deep tissue layers and causes severe corrosive injury.

Symptoms/injuries after ingestion : Severe irritation or burns to the mouth, throat, esophagus, and stomach. Possible esophageal perforation. Perforation of the digestive system may occur. Systemic fluoride toxicity has occurred following ingestion. Symptoms such as nausea, vomiting, abdominal pain, reduced heartbeat and blood pressure, shortness of breath have been reported

Chronic symptoms : Overexposure may cause damage to bones, teeth, all body tissues, kidney, and liver.

### 4.3. Indication of any immediate medical attention and special treatment needed

CALCIUM GLUCONATE GEL: Wearing chemical protective gloves, start massaging 2.5% calcium gluconate gel into the burn site. Apply gel frequently and massage continuously until medical attention is available. Quickly transport victim to an emergency care facility. Double bag, seal, label and leave contaminated clothing, shoes and leather goods at the scene for safe disposal.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide. Dry powder. Water spray.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : The product is not flammable.

Explosion hazard : Product is not explosive.

Reactivity : No dangerous reactions known under normal conditions of use.

#### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus and protective suit (see item 8).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8). This product is not flammable. However, if it is involved in a fire, extremely corrosive and very toxic hydrogen fluoride gas or fumes may be released into the air. Contact with metals, such as iron or steel, slowly releases extremely flammable and potentially explosive hydrogen gas. Closed containers may rupture violently and suddenly release large amounts of product when exposed to fire or excessive heat for a sufficient period of time. Firefighters should wear a positive pressure self-contained respirator (SCBA) and full-body encapsulating chemical protective suit.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Prevent entry to sewers and public waters. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Contain spill with absorbent material which does not react with spilled material and cautiously dilute with large excess of water. Neutralize carefully with soda ash or lime. Material will fume during neutralization; approach from upwind. Provide good ventilation. Contaminated absorbent material will pose the same hazards as the spilled product. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Never work alone with this chemical. Another person should be in view at all times and be equipped and trained to rescue. In case of leaks or spills, escape-type respiratory protective equipment should be available in the work area. If released, immediately evacuate the area. Ensure that emergency eyewash and showers are in the immediate vicinity of work. Ensure that appropriate first aid procedures are established and supplies are readily accessible to trained personnel. Be aware of typical signs and symptoms of poisoning and first aid procedures. Any signs of illness should be reported immediately to supervisory personnel. Seek medical attention for all exposures even if an exposure did not seem excessive. Symptoms of a severe exposure can be delayed. Closed handling systems should be used. Avoid generating vapors or mists. Prevent the release of vapors/mist into workplace air. Keep away from combustible materials. Do not use with incompatible materials. See Section 10 for more information. Keep containers tightly closed when not in use. Always add corrosives to COLD water. Assume that empty containers contain residues which are hazardous.

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### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store in metal or glass containers. Do not store in direct sunlight. Keep tightly closed. Empty container may contain hazardous residue. Do not add any other material to the container. Do not wash down the drain. Do not get in eyes, on skin, or on clothing. Wash well after use. Handle in accordance with good storage and handling practices. Do not allow smoking or food consumption while handling. Store in approved containers only.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No OSHA and ACGIH PEL's or TLV's for the listed ingredients of this product unless stated below:

Hydrogen chloride, CAS# 7647-01-0			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
5 ppm ceiling	5 ppm ceiling	5 ppm	2 ppm

Citric Acid, CAS# 77-92-9			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
5 ppm ceiling	5 ppm ceiling	5 ppm	2 ppm

Ammonium Hydrogen Fluoride, CAS# 1341-49-7			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
2.5 mg/ m3 (F)	Not Established	Not Established	2.5 mg/ m3 (F)

Hydrofluoric Acid (Estimated from after ABF dissolved in water), CAS# 7664-39-3			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
3 ppm	Not Established	Not Established	0.5 ppm as F - Ceiling= 2ppm as F

### 8.2. Exposure controls

Personal protective equipment : Protective safety glasses or goggles. Chemically resistant gloves. Protective clothing. Face shield. Respiratory protection of the dependent type.

Hand protection : Chemical resistant gloves.

Eye protection : Use chemically resistant safety glasses or goggles. A face shield when possibility exists for eye or face contact due to spraying liquid or airborne particles.

Skin and body protection : Wear long sleeves. Wear suitable protective clothing. Face shield when possibility exists contact due to spraying liquid or airborne particles.

Respiratory protection : Where excessive vapor, mist, or dust may result, use approved respiratory protection equipment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear Liquid.

Color : No data available

Odor : No fragrance.

Odor Threshold : No data available

pH : 1.0 – 2.0

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : > 100 °C

Flash point : No data available

Self ignition temperature : No data available

Decomposition temperature : No data available

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Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.055
Solubility	: Complete solubility in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Contact with reactive metals (e.g. aluminum) may result in the generation of hydrogen gas.

### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

Corrosive in contact with metals. Contact with metallic substances may release flammable hydrogen gas. Contact with strong Bases will cause excessive heat and splattering.

### 10.4. Conditions to avoid

None known

### 10.5. Incompatible materials

Metals. Strong bases. Avoid strong oxidizing agents, strong acids.

### 10.6. Hazardous decomposition products

Thermal decomposition may generate: Ammonia. Hydrogen Fluoride. Carbon oxides (CO, CO<sub>2</sub>) and Sulfur oxides (SO<sub>2</sub>)

Other decomposition products: No data available.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Oral LD50: 247 mg/kg (rat) Calculated

Dermal LD50: >50 - ≤ 200 mg/kg (rabbit) Calculated

Inhalation LC50: >1.0 - ≤ 5 mg/l (rat) D&M Calculated

Skin corrosion/irritation	: See Section 4
Serious eye damage/irritation	: See Section 4.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

Carcinogenicity : No known ingredients over 1.0% or over 0.1% that are also carcinogenic.

Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : See Section 4

Specific target organ toxicity (repeated exposure) : See Section 4

Aspiration hazard : Not classified  
Symptoms/injuries after inhalation : See Section 4  
Symptoms/injuries after skin contact : See Section 4  
Symptoms/injuries after eye contact : See Section 4.  
Symptoms/injuries after ingestion : See Section 4  
Chronic symptoms : See Section 4.

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### Additional Information

: The fluoride ion from hydrofluoric acid reduces serum calcium levels, which can cause severe injury and possibly fatality through hypocalcemia. HF is highly destructive to mucous membranes, skin, bones, eyes and the upper respiratory tract. Damages caused by HF may NOT be immediately noticeable by pain or blistering, so take extra precaution when handling. HF attacks the body slowly, so the full extent of tissue damage may not be noticed for 12-24 hours after contact. (See Section 4 for First Aid guidelines)

## SECTION 12: Ecological information

### 12.1. Toxicity

No Data

### 12.2. Persistence and degradability

No Data

### 12.3. Bioaccumulative potential

No Data

### 12.4. Mobility in soil

No Data

### 12.5. Other adverse effects

No Data

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods

: Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.

Waste disposal recommendations

: Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

## SECTION 14: Transport information

### 14.1. UN number, proper shipping name, class and packaging group.:

#### Domestic Ground Shipments

UN2922, CORROSIVE LIQUIDS, TOXIC, N.O.S. (HYDROCHLORIC ACID / AMMONIUM HYDROGEN DIFLUORIDE) 8, (6.1), II

### 14.2. Additional information

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

**TSCA Inventory:** The components of this product are listed.

**SARA Section 311/312, Hazard Category (40CFR 370.2):** Acute and Chronic health hazard.

**SARA Section 313, Toxic Release Reporting (40CFR Part 372):**

Hydrogen chloride, CAS# 7647-01-0, contains less than 5.0% by weight

Hydrofluoric Acid, CAS# 7664-39-3, contains less than 2.0% by weight

**SARA Section 302, EHS Emergency Planning (40CFR Part 355):** Hydrofluoric Acid, CAS#7664-39-3, 100 lbs.

**SARA Section 304, EHS Release Reporting (40CFR Part 355):** Hydrofluoric Acid, CAS#7664-39-3, 100 lbs.

**CERCLA Section 102-103 HS Release Reporting (40 CFR par 302-102a):**

Ammonium Hydrogen Fluoride, CAS# 1341-49-7, RQ 100 lbs

Hydrofluoric Acid, CAS# 7664-39-3, RQ 100 lbs

### 15.2. International regulations

No Data

### 15.2.2. National regulations

No Data

### 15.3. US State regulations

**California Prop. 65:** It is reasonable to assume that ammonia compounds contain arsenic, cadmium, chromium, and lead in concentrations ranging from a few parts per billion to several hundred parts per million.

## SECTION 16: Other information

Other information : None.

NFPA health hazard : 3

NFPA fire hazard : 0

NFPA reactivity : 1

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### HMIS III Rating

Health	: 3
Flammability	: 0
Physical	: 1
Personal Protection	: X

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