



PA-170.00

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 : PA-170.00
Product form : Mixture
Product code : 10-10080

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>
H226	Flammable liquids	3
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):

H226: Flammable liquid and vapor
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):

P210: Keep away from heat/sparks/open flames/hot surfaces. -No smoking.
P233: Keep container tightly closed
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/lighting/equipment
P242: Use only non-sparking tools
P243: Take precautionary measures against static charge
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

PA-170.00

Safety Data Sheet

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
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
P370+378: In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction
P403+P235: Store in a well-ventilated place. Keep cool
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 #	%
Phosphoric Acid	7664-38-2	5 - 10
Ammonium Hydrogen Fluoride	1341-49-7	< 6.5
Na Alkyl (C12-14) Ether Sulfate	68891-38-3	1 - 5
Hydrofluoric Acid (Estimated from after ABF dissolved in water)	7664-39-3	< 4
IPA- Isopropyl Alcohol	67-63-0	< 3

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.

PA-170.00

Safety Data Sheet

- 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.

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 : Flash point 133 °F (Closed Cup) However this product did not sustain combustibility per ASTM 4206, Standard Test Method for Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus.
- Explosion hazard : May form flammable/explosive vapor-air mixture.
- Reactivity : Contact with metals produces hydrogen gas which may form explosive mixtures with air.

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

PA-170.00

Safety Data Sheet

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. 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.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, dry, well-ventilated area away from heat sources and 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:

Phosphoric Acid, CAS# 7664-38-2			
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
1 mg/m3	3 mg/m3	Not Established	1 mg/m3

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

IPA- Isopropyl Alcohol, CAS# 67-63-0			
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
400 ppm	500 ppm	Not Established	200 ppm

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.

PA-170.00

Safety Data Sheet

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Dyed 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	: 133 °F (Closed Cup) However this product did not sustain combustion per ASTM 4206.
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.091
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

Phosphorus content is approximately 2.88% by weight.

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, CO₂) and Sulfur oxides (SO₂)

Other decomposition products: No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Oral LD₅₀: 121 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

PA-170.00

Safety Data Sheet

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.
Additional Informaion	: The fluoride ion from hydrofluoric acid reduces serum calcium levels, which can cause severe injury and possibly fatality througih hypocalcemia. HF is highly destructive to mucous membranes, skin, bones, eyes and the upper respiratory tract. Dammages caused by HF may NOT be immediately noticable by pain or blistering, so take extra precausion 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. (PHOSPHORIC ACID / AMMONIUM HYDROGENDIFLUORIDE) 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. Fire Hazard.
SARA Section 313, Toxic Release Reporting (40CFR Part372):
Hydrofluoric Acid, CAS#7664-39-3, < 4.0% by wt.
2-Propanol, CAS#67-63-0, < 2.5% by wt.
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 par302-102a):
Phosphoric Acid, CAS# 7664-38-2, RQ 5000 lbs.
Ammonium Hydrogen Fluoride, CAS# 1341-49-7, RQ 100 lbs
Hydrofluoric Acid, CAS# 7664-39-3, RQ 100 lbs

PA-170.00

Safety Data Sheet

15.2. International regulations

No Data

15.2.2. National regulations

No Data

15.3. US State regulations

California Prop. 65: 1,4-Dioxane CAS# 123-91-1 / Cancer. 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 : 2

NFPA reactivity : 1

HMIS III Rating

Health : 3

Flammability : 2

Physical : 1

Personal Protection : X

The information contained herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge at this date. It is provided without warranty, expressed or implied, as to the results of use of this information or to the product to which it relates. Recipient assumes all responsibility for the use of this information and the use, storage, or disposal of the product, including any resultant personal injury or property damage.