

Safety Data Sheet

Acid Wash One

Section 1: Identification

GHS product identifier

Product name: Acid Wash One

Product Code: 4

Recommended uses and uses advised against

Recommended use:

Degreaser, removal of strongly adhered residues and tars.

Uses not recommended:

Use on soft metals, delicate or softer surfaces not recommended.

Supplier details

Aleva Chemical, Inc.
 1792 Latham St.
 Memphis, TN 38106

Telephone (general)
 Website:

(888)504-8178
alevachem.com

Emergency telephone number

Infotrac:

(800) 535-5053

Section 2: Hazard identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

Acute Toxicity 3 (Dermal)
 Acute Toxicity 3 (Oral)
 Corrosive To Metals 1
 Eye Damage/Irritation 1 (Irreversible Effects)

Label Elements

OSHA HCS 2012

Danger



Hazard Statements

H301 Toxic in contact with skin.

H301 Toxic if swallowed.

H290 May be corrosive to metals.

H318 Causes serious eye damage.

Precautionary Statements

Prevention

P280 Wear protective gloves and protective clothing.
 P264 Wash hands and skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P234 Keep only in original container.
 P280 Wear eye protection and/or face protection where applicable.

Response

P302 + P352 IF ON SKIN: Wash with plenty of water.
 P312 Call a POISON CONTROL CENTER if you feel unwell.
 P321 Follow first aid procedures as appropriate for this chemical.
 P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
 P301 + P310 IF SWALLOWED: Immediately call a poison center and seek medical attention.
 P321 Specific treatment: see section 4 for first aid measures.

P330 Rinse mouth.
P390 Absorb spillage to prevent material damage.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
Continue rinsing.
P310 Immediately call a POISON CONTROL CENTER and seek medical attention.

Storage/Disposal

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Store in a well-ventilated place.
Keep container tightly closed.

P501 Dispose of contents/container per guidelines in section 13.

P405 Store locked up.

P403 + P233 Store in a well-ventilated place.
P406 Store in corrosive resistant container or container with resistant inner liner.
P501 Dispose of contents/container per guidelines in section 13.
P405 Store locked up.

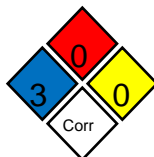
Other hazards

OSHA HCS 2012

No data available.

Other information

NFPA



Section 3: Composition/Information on Ingredients

Substances

Material does not meet the criteria of a substance.

Mixtures

Hydrofluoric Acid	[Hydrofluoric Acid] CAS No. 7664-39-3 5% - 18%
Glycol Ether EB	[Butyl Glycol Ether] CAS No. 111-76-2 0% - 5%

See section 11 for toxicological information.

Section 4: First-Aid Measures

Description of first aid measures

Inhalation:

Move victim to fresh air. Give artificial respiration if victim is not breathing.

Skin:

Avoid direct contact. Wear chemical protective clothing, if necessary. As quickly as possible, remove contaminated clothing, shoes and leather

goods (e.g. watchbands, belts). Immediately flush with lukewarm, gently flowing water. Limit flushing with water to 5 minutes if 0.13% benzalkonium chloride (Zephiran®) solution or 2.5% calcium gluconate gel is available. If these treatments are not available, continue flushing until medical treatment is available. A certain quantity of either prepared solution or the calcium gluconate gel be kept on hand at all times. Solutions should be replaced annually if not previously used.
BENZALKONIUM CHLORIDE: Begin soaking the affected area in iced 0.13% benzalkonium chloride (Zephiran®) solution. Use ice cubes, not shaved ice, to prevent frostbite. If immersion is not practical, towels should be soaked with iced 0.13% benzalkonium chloride (Zephiran®) solutions and used as compresses for the burned area. Compresses should be changed every 2-4 minutes. Benzalkonium chloride (Zephiran®) soaks or compresses should be continued until medical attention is available.
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.

Eye:

Avoid direct contact. Wear chemical protective gloves if necessary. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye. DO NOT use benzalkonium chloride (Zephiran®) for eye contact. If sterile 1% calcium gluconate is available, limit water flushing to 5 minutes. Then, use the 1% calcium gluconate solution to repeatedly rinse the eye(s). Immediately transport victim to an emergency care facility. Continue flushing with water, neutral saline or 1% calcium gluconate during transport, if at all possible.

Ingestion:

Remove source of contamination or move victim to fresh air. If breathing is difficult, trained personnel should administer oxygen and 2.5% calcium gluconate, preferably with a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. If breathing has stopped, trained personnel should begin artificial respiration (AR) or, if the heart has stopped, cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED) immediately. Quickly transport victim to an emergency care facility.

Most important symptoms and effects, both acute and delayed

Refer to section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed:

All treatments should be based on observed signs and symptoms of distress in the patient. FIRST AID PROCEDURES SHOULD BE ESTABLISHED PRIOR TO USE. DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. SEEK MEDICAL ATTENTION FOR ALL EXPOSURES. : Due to delayed and persistent symptoms, observe patient closely for 48 hours. Prompt action is essential in all cases of contact and first aid procedures must be followed if any contact is suspected. Consult a doctor and/or the nearest Poison Control Centre for ALL EXPOSURES. Some first aid procedures recommended above require advanced first aid training. Protocols for undertaking advanced procedures must be developed in consultation with a doctor and routinely reviewed. All first aid procedures should be periodically reviewed by a doctor familiar with the material and its conditions of use in the workplace.
Antidote: Always have calcium gluconate gel on hand. The use of infiltration therapy and intraarterial therapy for hydrofluoric acid burns resulting from concentrations greater than 20% should be made by qualified medical personnel. Calcium gluconate may be administered intravenously slowly to bind to the fluoride ion. This administration needs to be monitored under the supervision of a physician.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

Use extinguishing agents compatible with acid and appropriate for fire surrounding hydrofluoric acid containers. The extinguishing medium used depends on the concentration of the acid. Water spray or fog may be used where concentrations below 60% are present. Higher concentrations may react violently with water and a dry agent, e.g. dry chemical powder is recommended. Use water spray to keep fire exposed containers cool.

Unsuitable extinguishing media:

None.

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards:

Reaction with certain metals generates flammable and potentially explosive hydrogen gas. Considerable heat is evolved when contacted with many substances.

Hazardous combustion products:

Oxides of carbon.

Advice for firefighters

Hydrofluoric acid 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. A large amount of heat is generated when highly concentrated hydrofluoric acid solutions are diluted with water. 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.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions:

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material.

Emergency procedures:

As an immediate precautionary measure, isolate spill or leak for at least 50 meters.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and material for containment and clean-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. **LARGE SPILLS:** Evacuate area. Contact fire and emergency services and supplier for advice.

Section 7: Handling and Storage

Precautions for safe handling

Handling:

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. **LARGE SPILLS:** Evacuate area. Contact fire and emergency services and supplier for advice.

Conditions for safe storage, including any incompatibilities

Storage:

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.

Incompatible materials or ignition sources:

Substance is incompatible with over 35 specific chemicals. Please refer to the NFPA Fire Protection Guide for specifics. Heat, Glass, concrete and other silicon-bearing materials will yield silicon tetrafluoride. Pressure build-up from this process has been known to blow up glass containers. Carbonates, sulphides, and cyanides will yield toxic gases such as carbon dioxide, hydrogen sulphide and hydrogen cyanide. Alkalis, some oxides, fluorine and other water-reactive materials will cause strong exothermic reactions that can be violent. Reacts with most common metals to produce hydrogen. Corrosive to many materials, including leather, rubber and many organics.

Section 8: Exposure Controls/Personal Protection

Control parameters

Component	Result	Exposure Limits/Guidelines		
		NIOSH	ACGIH	Canada Ontario
Hydrofluoric Acid CAS No. 7664-39-3	STELs	6 ppm	6 ppm	Data lacking
	TWAs	3 ppm	0.5 ppm	Data lacking
Glycol Ether EB CAS No. 111-76-2	STELs	50 ppm	Data lacking	Data lacking
	TWAs	20 ppm	Data lacking	Data lacking

Exposure controls

Engineering measures and controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Incompatible materials or ignition sources:

Pictograms:



Respiratory:

Not required.

Eye and face:

Must wear goggles when using this product.

Hands:

Skin and body: Must wear chemical protective gloves when using this product.
 General industrial hygiene considerations: Must wear chemical protective clothing when using this product.
 Environmental exposure controls: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling.
 Follow best practice for site management and disposal of waste. Avoid release to the environment.

Key to Abbreviations
 AICGHI= American Conference of Governmental Industrial Hygiene
 OSHA =Occupational Safety and Health Administration
 MSHA = Mine Safety and Health Administration
 TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures
 NIOSH= National Institute of Occupational Safety and Health
 STEV = Short Term Exposure Value
 STEL = Short Term Exposure Limits are based on 15-minute exposures

Section 9: Physical and Chemical Properties

Information on physical and chemical properties

Material Description				
Physical Form	Liquid		Appearance/Description	Opaque
Color	Deep brown/red		Odor	Moderate acidic odor
Taste	Data lacking		Particulate Type	Not relevant
Particulate Size	Not relevant		Aerosol Type	Not relevant
Odor Threshold	Data lacking		Physical and Chemical Properties	Data lacking
General Properties				
Boiling Point	> 212 F		Melting Point	Data lacking
Decomposition Temperature	Data lacking		Heat of Decomposition	Data lacking
pH	< 2		Specific Gravity/Relative Density	1.038
Density	Data lacking		Bulk Density	Data lacking
Water Solubility	Soluble		Solvent Solubility	Not applicable
Viscosity	Data lacking		Explosive Properties	Classification criteria not met
Oxidizing Properties:	Data lacking			
Volatility				
Vapor Pressure	Data lacking		Vapor Density	Data lacking
Evaporation Rate	1		VOC (Wt.)	Data lacking
VOC (Vol.)	Data lacking		Volatiles (Wt.)	Data lacking
Volatiles (Vol.)	Data lacking			
Flammability				
Flash Point	Not applicable		UEL	Not applicable
LEL	Data lacking		Autoignition	Not applicable
Self-Accelerating Decomposition Temperature (SADT)	Data lacking		Heat of Combustion (ΔHc)	Not applicable
Burning Time	Not applicable		Flame Duration	Not applicable
Flame Height	Not applicable		Flame Extension	Not applicable
Ignition Distance	Not applicable		Flammability (solid, gas)	Not applicable
Environmental				
Half-Life	Data lacking		Octanol/Water Partition coefficient	Data lacking
Coefficient of water/oil distribution	Data lacking		Bioaccumulation Factor	Data lacking
Bioconcentration Factor	Data lacking		Biochemical Oxygen Demand BOD/BOD5	Data lacking
Chemical Oxygen Demand	Data lacking		Persistence	Data lacking
Degradation	Data lacking			

Section 10: Stability and Reactivity

Reactivity

Normally stable.

Chemical stability

Normally stable.

Possible hazardous reactions

Tends to associate by means of hydrogen bonds to form polymers in both liquid and gaseous states. This polymerization is not hazardous.

Conditions to avoid

Store in approved containers only. Store in cool, well-ventilated area. Flammable hydrogen gas can be generated in metal storage containers. Diking of storage tanks is recommended.

Incompatible materials

Substance is incompatible with over 35 specific chemicals. Please refer to the NFPA Fire Protection Guide for specifics. Heat, Glass, concrete and other silicon-bearing materials will yield silicon tetrafluoride. Pressure build-up from this process has been known to blow up glass containers. Carbonates, sulphides, and cyanides will yield toxic gases such as carbon dioxide, hydrogen sulphide and hydrogen cyanide. Alkalis, some oxides, fluorine and other water-reactive materials will cause strong exothermic reactions that can be violent. Reacts with most common metals to produce hydrogen. Corrosive to many materials, including leather, rubber and many organics.

Hazardous decomposition products

Fluoride fumes.

Section 11: Toxicological Information

Information on toxicological effects

Component	CAS No.	Data
Hydrofluoric Acid	7664-39-3	Oral, rat: LD50 = >90 mL/kg. Inhalation, mouse: LC50 = 342 ppm/1H. Inhalation, rat: LC50 = 1276 ppm/1H. Data lacking Fertility: post- and pre-implantation mortality, Inhalation-rat TCLo=470 µg/m3/4H. Mutagenicity: DNA Damage: D. Melanogaster – Inhalation 1300 ppb/6W. Sex Chromosome Loss/Non-disjunction: D. Melanogaster – Inhalation 2900 ppb.
Glycol Ether EB	111-76-2	Data lacking Data lacking Data lacking

Target organs

No data available.

Routes of entry and/or exposure

Inhalation and ingestion. Skin contact. Eye contact. Skin absorption.

Potential health effects

Inhalation

Acute (immediate):

May be fatal if inhaled. Low concentrations (a few ppm) can cause irritation of the nose, throat, eyes and respiratory tract. Higher concentrations can cause severe burns to the throat, airways and lungs. Fluid accumulation in the lungs and irregular heartbeat has led to deaths within hours following inhalation and, in some cases, concurrent skin contact with unknown concentrations of HF. Within 24-48 hours, the victim may experience a rapidly worsening difficulty in breathing, accompanied by coughing. These symptoms are due to the development of a life-threatening accumulation of fluid in the lungs (pulmonary edema). Severe short-term exposures may result in long-lasting effects such as shortness of breath and pulmonary emphysema (larger than normal air spaces in the lungs which decrease lung efficiency).

Chronic (delayed):

Absorbed fluoride can cause metabolic imbalances with irregular heartbeat, central nervous system depression, seizures, and deaths. Long-term exposure may cause osteofluorosis (weakened bone structure), skin disorders, and respiratory, liver and kidney effects. To the best of our knowledge, the chronic toxicity of this substance has not been fully investigated.

Skin

Acute (immediate):

May be fatal if absorbed through skin and penetration may continue for several days. Hydrofluoric acid is extremely corrosive and can cause very deep and excruciatingly painful burns and tissue loss. Burns from concentrated solutions (greater than 50%) are felt immediately and tissue destruction is readily apparent. Weaker solutions (20-50%) result in burns that are apparent after several hours. Burns from solutions of less than 20% may take up to 24 hours to become apparent. Weak solutions (less than 7%) 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.

Chronic (delayed):

Absorbed fluoride can cause metabolic imbalances with irregular heartbeat, central nervous system depression,

		seizures, and deaths. Long-term exposure may cause osteofluorosis (weakened bone structure), skin disorders, and respiratory, liver and kidney effects. To the best of our knowledge, the chronic toxicity of this substance has not been fully investigated.
Ingestion	Acute (immediate):	May be fatal if swallowed. Hydrofluoric acid is corrosive and can cause severe burning of the mouth, throat and stomach. 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. In some cases, death occurred in less than one hour following ingestion. Ingestion is not a typical route of occupational exposure.
	Chronic (delayed):	Absorbed fluoride can cause metabolic imbalances with irregular heartbeat, central nervous system depression, seizures, and deaths. Long-term exposure may cause osteofluorosis (weakened bone structure), skin disorders, and respiratory, liver and kidney effects. To the best of our knowledge, the chronic toxicity of this substance has not been fully investigated.
Eye	Acute (immediate):	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. The gas can dissolve in the moisture on the surface, forming corrosive hydrofluoric acid. Irritation has been reported with exposure to concentrations as low as 0.24 ppm for 1 hour.
	Chronic (delayed):	My cause blindness, blurred vision or foreign body sensation.

Section 12: Ecological Information

Toxicity

Fish (fresh water) 60 ppm lethal (time period not specified)

Persistence and degradability

Material data lacking.

Bioaccumulative potential

Material data lacking.

Mobility in soil

Material data lacking.

Other adverse effects

No studies have been found.

Other information

No additional information available.

Section 13: Disposal Considerations

Waste treatment methods

Product waste

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Do not reuse container, keep used container tightly closed during storage. Container may contain dangerous product residue.

Section 14: Transport Information

Special precautions for user

Contain spills immediately, do not allow liquid to sit in contact with surrounding surfaces.

Transport in bulk according to annex II of MARPOL 73/78 and the IBC code

Section 15: Regulatory Information

Safety, health and environmental regulations specific to substance or mixture

SARA hazard classifications:

This material contains Hydrofluoric acid (CAS# 7664-39-3, 48-50%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Section 16: Other Information

Last revision date:

6/15/2015

Preparation date:

7/17/2018

Disclaimer and statement of liability:

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstance of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.