SAFETY DATA SHEET

1. Identification

Product identifier **Acid 2**

Other means of identification

Product code A4025

Recommended use Acidic Cleaner for Industrial Use

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Americo Chemical Products, Inc.

Address 551 Kimberly Drive
Carol Stream, IL 60188
United States

Telephone Office 630-588-0830

Website http://americochemical.com/

E-mail Not available.

Emergency phone number CHEMTREC Emergency #: 800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response 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. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.

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

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Phosphoric Acid		7664-38-2	60 - < 70
Ammonium bi Fluoride		1341-49-7	< 1
1,4-Dioxane"		123-91-1	< 0.1
Hydrochloric Acid		7647-01-0	< 0.1
Other components below reportable levels			30 - < 40

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact
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.

Eye contact
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.

Ingestion
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.

Most important symptoms/effects, acute and delayed
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.

Indication of immediate medical attention and special treatment needed
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.

General information
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

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
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 mist or vapor. 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
This product is miscible in water. Should not be released into the environment.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. 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
1,4-Dioxane" (CAS 123-91-1)	PEL	360 mg/m3
		100 ppm
Ammonium bi Fluoride (CAS 1341-49-7)	PEL	2.5 mg/m3
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm
Phosphoric Acid (CAS 7664-38-2)	PEL	1 mg/m3

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value	Form
Ammonium bi Fluoride (CAS 1341-49-7)	TWA	2.5 mg/m3	Dust.

US. ACGIH Threshold Limit Values

Components	Type	Value
1,4-Dioxane" (CAS 123-91-1)	TWA	20 ppm
Ammonium bi Fluoride (CAS 1341-49-7)	TWA	2.5 mg/m3
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	2 ppm
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1,4-Dioxane" (CAS 123-91-1)	Ceiling	3.6 mg/m3
		1 ppm
Ammonium bi Fluoride (CAS 1341-49-7)	TWA	2.5 mg/m3
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Ammonium bi Fluoride (CAS 1341-49-7)	3 mg/l	Fluoride	Urine	*
	2 mg/l	Fluoride	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

1,4-Dioxane" (CAS 123-91-1)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

1,4-Dioxane" (CAS 123-91-1)	Skin designation applies.

US - Tennessee OELs: Skin designation

1,4-Dioxane" (CAS 123-91-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

1,4-Dioxane" (CAS 123-91-1)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

1,4-Dioxane" (CAS 123-91-1)	Can be absorbed through the skin.

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.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Keep away from food and drink. 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

Physical state Liquid.

Color Slight Yellow Tint

Odor Mild.

Odor threshold Not available.

pH 0.72 (as is) estimated

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) 100 % Complete

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.43 (as is) estimated

10. Stability and reactivity

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Bases. Reducing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful 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

Acute toxicity	In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if swallowed. May cause respiratory irritation.

Components	Species	Test Results
1,4-Dioxane" (CAS 123-91-1)		
Acute		
Dermal		
LD50	Rabbit	7600 mg/kg
	Rat	> 8300 mg/kg
Inhalation		
LC50	Mouse	37 mg/l, 2 Hours
	Rat	46 mg/l, 2 Hours
Oral		
LD50	Cat	2000 mg/kg
	Dog	2100 mg/kg
	Guinea pig	3150 mg/kg
	Mouse	5700 mg/kg
	Rabbit	2000 mg/kg
	Rat	5.2 ml/kg

Components	Species	Test Results
Ammonium bi Fluoride (CAS 1341-49-7)		
Acute		
Oral		
LD50	Rat	130 mg/kg
Hydrochloric Acid (CAS 7647-01-0)		
Acute		
Dermal		
LD50	Mouse	1449 mg/kg
Inhalation		
LC50	Mouse	1108 ppm, 1 Hours
	Rat	3124 ppm, 1 Hours
Oral		
LD50	Rabbit	900 mg/kg
Phosphoric Acid (CAS 7664-38-2)		
Acute		
Dermal		
LD50	Rabbit	2740 mg/kg
Oral		
LD50	Rat	1530 mg/kg

* Estimates for product may be based on additional component data not shown.

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 a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

1,4-Dioxane" (CAS 123-91-1)	2B Possibly carcinogenic to humans.
Ammonium bi Fluoride (CAS 1341-49-7)	3 Not classifiable as to carcinogenicity to humans.
Hydrochloric Acid (CAS 7647-01-0)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

1,4-Dioxane" (CAS 123-91-1)	Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Components		Species	Test Results
1,4-Dioxane" (CAS 123-91-1)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	6700 mg/l, 96 hours
Hydrochloric Acid (CAS 7647-01-0)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	282 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1,4-Dioxane" -0.27

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. 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

UN number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric Acid)

Transport hazard class(es)

Class 8

Subsidiary risk -

Label(s) 8

Packing group II

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions B2, IB2, T11, TP2, TP27

Packaging exceptions 154

Packaging non bulk 202

Packaging bulk 242

Reportable Quantity (RQ) 100# (1,4-Dioxane"); 100# (Ammonium bi Fluoride); 5000# (Hydrochloric Acid); 5000# (Phosphoric Acid)

DOT

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,4-Dioxane" (CAS 123-91-1)	Listed.
Ammonium bi Fluoride (CAS 1341-49-7)	Listed.
Hydrochloric Acid (CAS 7647-01-0)	Listed.
Phosphoric Acid (CAS 7664-38-2)	Listed.

SARA 304 Emergency release notification

Hydrochloric Acid (CAS 7647-01-0)	5000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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
Hydrochloric Acid	7647-01-0	5000	500 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ammonium bi Fluoride	1341-49-7	< 1
1,4-Dioxane"	123-91-1	< 0.1

Other federal regulations

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

1,4-Dioxane" (CAS 123-91-1)
Hydrochloric Acid (CAS 7647-01-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrochloric Acid (CAS 7647-01-0)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Hydrochloric Acid (CAS 7647-01-0)	6545

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Hydrochloric Acid (CAS 7647-01-0)	20 %WV

DEA Exempt Chemical Mixtures Code Number

Hydrochloric Acid (CAS 7647-01-0)	6545

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Phosphoric Acid (CAS 7664-38-2)	High priority

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,4-Dioxane" (CAS 123-91-1)
Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

US. Massachusetts RTK - Substance List

1,4-Dioxane" (CAS 123-91-1)
Ammonium bi Fluoride (CAS 1341-49-7)
Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

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

1,4-Dioxane" (CAS 123-91-1)
Ammonium bi Fluoride (CAS 1341-49-7)
Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

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

1,4-Dioxane" (CAS 123-91-1)
Ammonium bi Fluoride (CAS 1341-49-7)
Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

US. Rhode Island RTK

1,4-Dioxane" (CAS 123-91-1)
Ammonium bi Fluoride (CAS 1341-49-7)
Hydrochloric Acid (CAS 7647-01-0)
Phosphoric Acid (CAS 7664-38-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-Dioxane" (CAS 123-91-1) Listed: January 1, 1988

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 07-20-2016

Version # 01

HMIS® ratings Health: 3
Flammability: 0
Physical hazard: 0

Disclaimer The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control, it should not be taken as warranty or representation for which AMERICO CHEMICAL PRODUCTS, INC. assumes legal responsibility. This information is provided solely for your consideration, investigation and verification.