SAFETY DATA SHEET
HF Free Aluminum Brightener

SECTION 1. IDENTIFICATION

Revision Date: 19 December 2020

1.1 Identifier

Product Brand name: HF Free Aluminum Brightener
Product Description: Blend of various acids with other adjuvant.
Product Code: 200006

1.2. Recommended Use & Restriction of Use:

Cleaning Metal and Inorganic Surfaces.
Not for Food, Drug, Pesticide or Biocide use. Read all 16 sections stated herein thoroughly and completely.

1.2 Details of the supplier of the safety data sheet

Tidol Corporation
146 Shorting Road, Scarborough ON M1S 3S6, Canada
Tel: 416-293-2244/ 1-800-881-8672 Fax: 416-293-5808
Email: info@tidolcorp.com

1.3 Emergency Telephone Number

Vendor 1-800-881-8672 or 416-293-2244 - 24hrs

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or Mixture

Skin Corrosion (Category 1B)
Serious Eye Damage (Category 1)
Metal Corrosion (Category 1)
Specific target Organ (Category 3)

2.2 Label elements

Signal Word Warning

Hazard Statements

H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H350 - May cause cancer (Inhalation).
H402 - Harmful to aquatic life.

Precautionary Statements

Prevention

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.

P234 - Keep only in original container.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

2.4 Other hazards

Potential Acute Health Effects:

Very hazardous in case of contact with eye, skin, ingestion and inhalation. Liquid or spray mist may produce tissue damage especially mucous membranes of eyes, mouth and respiratory tract. Will burn eyes and skin on contact. Respiratory track characterized by coughing, choking and shortness of breath. Inflammation of eyes results in redness, watering and itching. Skin contact results in scaling, redness or blistering.

Potential Chronic Helath Effects:

Carcinogenic Effects, NA; Mutagenic Effects, NA; Teratogenic Effects, NA; Developmental Toxicity, NA. May be toxic to kidneys, liver, mucous membranes, repiratory tract, skin and teeth.

Target Organs

Respiratory Tract

NFPA Rating	**HMIS Classification**
Health hazard: 3	Health hazard: 3
Fire: 0	Flammability: 0
Reactivity Hazard: 1	Physical hazards: 1

2.5 Unknown Acute Toxicity

No information available

SECTION 3. COMPOSITON/INFORMATION ON INGREDIENTS

3.1 Substances

No information available

3.2 Mixtures

COMPONENT	CAS #	CONCENTRATIONS W/W
Ammonium Bifluoride	1314-49-7	4-6%
Sulfuric Acid	7647-01-0	10-12%

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with water for 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact: Flush skin with water for 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Product is a corrosive material; causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to delicate tissue and danger of perforation. Use of gastric lavage or emesis contraindicated due to the product being corrosive. Possible perforation ofr stomach or esophagus should be investigated.

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

No information Available.

SECTION 5. FIRE FIGHTING MEASURES

Flammability of the product : Non-Flammable

Extinguishing media

Suitable Extinguishing Media	:	Foam, carbon dioxide, dry chemical.
Unsuitable Extinguishing Media	:	Do not use water. Do not get water inside containers. Do not apply water stream directly at source of leak.

Special exposure hazards

Explosion Hazard	:	Product is not explosive.
Reactivity	:	May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. This product may act as an oxidizer.

Special protective equipment for fire-fighters

Precautionary Measures Fire	:	Exercise caution when fighting any chemical fire.
Firefighting Instructions	:	Use water spray or fog for cooling exposed containers.
Protection During Firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products:		Toxic fumes are released.
Other Information	:	Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary and unprotected personnel from entering area. Avoid breathing vapors. Provide adequate ventilation. Do not touch or walk through spilled material. Beware of vapors accumulating to form explosive hydrogen gas mixtures. Full personal safety equipment (suit gloves, respirator, face shield) required.

6.2 Environmental precautions

Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Contain spill area.

6.3 Methods and material for containment and cleaning up

Corrosive liquid! Ventilate area. Prevent runoff. Contain and collect spillage with absorbent material e.g. sand, earth, vermiculite etc and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Dilute with water and mop-up or absorb with an inert dry material and place in an appropriate waste disposal container. Avoid contact with strong oxidizers.

6.4 Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7. HANDLING AND STORAGE

7.1 Handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Additional Hazards When Processed: May be corrosive to metals. May release corrosive vapors. NEVER pour water into this substance; when dissolving or diluting always add it slowly to the water.

7.2 Storage

Technical Measures	:	Comply with applicable regulations.
Storage Conditions	:	Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.
Incompatible Materials	:	Combustible materials. Reducing agents. Strong oxidizers. Strong bases. Metals. Water.

7.3 Incompatibilities/Specific end uses : Industrial use.

Additional Information

Special shipping instructions: Protect against physical damage. Use precaution when handling or shipping any chemical substance. Present appropriate placards when applicable, be sure documentation is correct, and each container has the proper safety marks affixed.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Sulfuric acid	TWA: 0.2 mg/m3	Vacated) TWA: 1 mg/m3 TWA: 1 mg/m3	IDLH: 15 mg/m3 TWA: 1 mg/m3	TWA: 1 mg/m3

Legend
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties.

Appearances	Liquid
Initial Boiling Point	Not applicable
Boiling Range	Not applicable
Bulk Densities	Not Applicable
Evaporation Rate	Not Available
Flammability	Non flammable
Upper Flammability limit	Non Flammable
Lower Flammability limit	Non flammable
Partition coefficient	Not available
Auto Ignition temperature	Non flammable
Decomposition Temperature	Not available
Color	Clear
Densities	Not Available.

Explosive properties	Not Applicable
Extinguishing Media for Fires	Non-Flammable
Flash Points	Not Available.
Heats of Combustion	Not Available.
Melting point/freezing point	Not applicable
Odor Threshold Values	Not Available.
Odors	Pungent
Percent Volatility	Not Available.
pH Value	1.5±0.50
Specific Gravity	Not Available
Vapor Pressures	Not Available
Viscosity.	Not Available.
Water Miscibility	Water Soluble
Water Solubility (Qualitative)	Not Available.

9.2 Other information

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. This product may act as an oxidizer.

10.2 Chemical stability The product is stable under normal conditions

10.3 Possibility of hazardous reactions Very Corrosive. Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid Extremely high or low temperatures and incompatible materials.

10.5 Incompatible Materials Combustible materials. Reducing agents. Strong bases. Strong oxidizers. Metals. Water.

10.6 Hazardous polymerization Under normal conditions of storage and use, hazardous polymerization will not occur

10.7 Hazardous decomposition products Thermal decomposition generates: Corrosive vapors.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute Toxicity (Oral): Not classified
Acute Toxicity (Dermal): Not classified
Acute Toxicity (Inhalation): Not classified
LD50 and LC50 Data: Not available

Other information on acute toxicity No data available

Skin corrosion/irritation Corrosive through skin absorption

Serious eye damage/eye irritation Eyes: very corrosive

Respiratory or skin sensitization Dryness, reddening, blistering

Germ cell mutagenicity No data available

Specific target organ toxicity -- single exposure (Globally Harmonized System)
Liver, respiratory/gastro tract, eyes and skin

Specific target organ toxicity -- repeated exposure (Globally Harmonized System)
Liver, respiratory/gastro tract, eyes, skin and general overall organs

Aspiration hazard Will burn mouth, throat and respiratory tract

Potential health effects

Inhalation May be toxic if inhaled. Causes respiratory tract inflammation/burns.

Ingestion May be toxic if swallowed and causes burns/tissue destruction.

Skin Toxic if absorbed through skin. Causes skin irritation/blisters.

Eyes Will burn eyes on contact.

Symptoms related to the physical, chemical and toxicological characteristics
No information available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity Harmful to aquatic life.
12.2 Persistence and degradability Expected to be biodegradable
12.3 Bio accumulative potential No information available.
12.4 Mobility in soil Product absorbs weakly to most soil types
12.5 Results of PBT and vPvB assessment No information available.
12.6 Other adverse effects No information available.
12.7 Additional Information

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Handling for disposal All waste from this product including all empty containers must be disposed of in accordance with municipal, provincial and federal regulations.
Methods of disposal No information available.
Contaminated packaging No information available.

SECTION 14. TRANSPORT INFORMATION

Product as sold

Land Transport -TDG Ground/Rail

14.1 UN number UN1830
14.2 UN proper shipping name UN1830, Sulfuric Acid, Class 8, PG II
14.3 Transport hazard class(es) 8
14.4 Packing group II
14.5 Environmental hazards No information available.
14.6 Special precautions for user Follow sections 2,3,and 4

SECTION 15. REGULARTORY INFORMATION

US Federal Regulations

Chemical Name (CAS No.)	CERCLA RQ	EPCRA 304 RQ	SARA 302 TPQ	SARA 313
Sulfuric acid (7664-93-9)	1000 lb	1000 lb	1000 lb	Yes

SARA 311/312

Sulfuric Acid, 70-100%
Immediate (acute) health hazard. Delayed (chronic) health hazard. Reactive hazard

US TSCA Flags Not present

US State Regulations

California Proposition 65

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Sulfuric acid (7664-93-9)	Yes	No	No	No
Strong inorganic acid mists containing sulfuric acid	Yes	No	No	No

State Right-To-Know Lists

Sulfuric acid (7664-93-9)
U.S. - Massachusetts - Right To Know List - Yes U.S. - New Jersey - Right to Know Hazardous Substance List - Yes U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - Yes U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No U.S. - Pennsylvania - RTK (Right to Know) List - Yes

Canadian Regulations

Sulfuric acid (7664-93-9)
Listed on the Canadian DSL (Domestic Substances List) Not listed on the Canadian NDSL (Non-Domestic Substances List)

International Inventories/Lists

Chemical Name (CAS No.)	Australia AICS	Turkey CICR	Korea ECL	EU EINECS	EU ELINCS	EU SVHC	EU NLP	Mexico INSQ
Sulfuric acid (7664-93-9)	Yes	No	Yes	Yes	No	No	No	No

Chemical Name (CAS No.)	China IECSC	Japan ENCS	Japan ISHL	Japan PDSCL	Japan PRTR	Philippines PICCS	New Zealand NZIOC	US TSCA
Sulfuric acid (7664-93-9)	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR).

SECTION 16. OTHER INFORMATION

Specific Hazard: N/A

HMIS Ratings :

The information on this Safety Data Sheet has been obtained from the Globally Harmonized System of Classification and Labeling of Chemicals, Guidance on the preparation of Safety Data Sheet, Suppliers, Manufacturers, and where applicable, from other reliable sources such as CCOHS, RTECS and worldwide web. However, TIDOL CORPORATION makes no warranties, expressed or implied, as to the accuracy; completeness or adequacy of the information contained herein, and shall not be held liable, regardless of fault, to anyone directly or indirectly for damages or injuries in the use of this product arising out of or in connection with the accuracy, completeness or adequacy of such information. It is the purchaser and the user of the product to evaluate the usefulness of the product and the information inscribed here.

Free samples are provided for testing for fitness of the product for use by the purchaser or another third party client and their compliance with applicable statues is a strict condition of sale. All information given in course of communication is from the best of our knowledge of the products. All recommendations and suggestions are believed to be reliable within limited scope, but should not be construed as warranties. Tidol Corporation, their associated companies and directors disclaim any liability in connection with the purchase, transportation, storage and the use of the product or any data communication.