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Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Name** SOUR**Other means of identification****Product Code** 405
UN/ID No. UN1778
Synonyms None**Recommended use of the chemical and restrictions on use****Recommended Use** Iron Removing Sour.
Uses advised against No information available**Manufacturer Address**

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency telephone number

Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION**Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Label elements**Emergency Overview****Danger****Hazard statements**Causes severe skin burns and eye damage
May be corrosive to metals**Appearance** aqueous solution**Physical state** liquid**Odor** Pungent**Precautionary Statements - Prevention**Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see Section 4 on this label)

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 or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up

Store in a corrosive resistant container.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

- May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Fluorosilicic acid	16961-83-4	<20	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General advice	Immediate medical attention is required.
Eye contact	Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.
Skin Contact	Immediately flush with water for at least 15-20 minutes while removing contaminated clothing and shoes, paying particular attention to skin under the nails. Always get medical attention no matter how minor skin burns appear. Wash contaminated clothing before reuse, but destroy contaminated shoes.
Inhalation	Remove victim from immediate source of exposure to fresh air. If breathing is difficult, administer oxygen if available. If victim is not breathing, administer CPR. If individual experiences nausea, headache, or dizziness, get immediate medical attention.
Ingestion	Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person. Rinse mouth.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms Corrosive. Contact may cause severe eye irritation, eye burns, and permanent eye damage. Contact may cause severe skin irritation, skin burns, and permanent skin damage. Harmful if inhaled. May cause severe irritation and burns of the nose, throat, and respiratory tract. Harmful or fatal if swallowed. May cause severe irritation and burns of the mouth, throat and digestive tract. Symptoms of overexposure may include ulceration of the nose and throat, coughing, salivation, headache, fatigue, dizziness, nausea, shock, and pulmonary edema (accumulation of fluid around the lungs). May lead to coma or death. Onset of symptoms may be delayed. Prolonged or repeated overexposure to fluoride compounds may cause fluorosis. Fluorosis is characterized by skeletal changes, consisting of osteosclerosis (hardening or abnormal density of bone) and osteomalacia (softening of bones) and by mottled discoloration of the enamel of teeth (if exposure occurs during enamel formation). Symptoms may include bone and joint pain and limited range of motion. Conditions aggravated by exposure may include skin and respiratory (asthma-like) disorders.

Indication of any immediate medical attention and special treatment needed

Note to physicians Beware of late onset of pulmonary edema for up to 48 hours. Treat severe burns similar to hydrofluoric acid exposure.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray (fog). Dry chemical. Carbon dioxide (CO₂).

Large Fire Water spray or fog.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical

Contact with metals may evolve flammable hydrogen gas. Keep container cool with water, using fog nozzles, as decomposition will occur above 222°F and produce toxic and corrosive fumes of fluoride.

Hazardous combustion products When heated to decomposition (222°F), it emits highly toxic and corrosive fumes of hydrofluoric acid, silicon tetrafluoride and hydrogen gas.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool fire exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate nonessential personnel. Ventilate area. Wear appropriate personal protection equipment.

Environmental precautions See Section 12 for additional ecological information.

Methods for containment Completely contain spilled material with dikes or sand bags, etc.

Methods for cleaning up Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water and neutralized. Flush spill area with water. Neutralization products, both solid and liquid, must be recovered for disposal. Provide ventilation and be wary of hydrogen generated upon contact with some metals.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Do not get in eyes, on skin, or clothing. Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation. If pungent, irritating odor can be detected, workers are being overexposed.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed and properly labeled. Containers that have been emptied will retain product residue and should be handled as if they were full. Store in a cool, dry, well-ventilated place away from incompatible materials. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored. Avoid contact with heat, sparks and open flames.

Incompatible materials

Avoid contact with metals, stoneware, strong acids and alkalis, explosives, toxicants, readily oxidizable materials, alkali metals, combustible solids, and organic peroxides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Fluorosilicic acid 16961-83-4	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F TWA: 2.5 mg/m ³ dust (vacated) TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³ F

Appropriate engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state
Appearance
Color

liquid
aqueous solution
clear green

Odor
Odor threshold

Pungent
No information available

Property

pH
Melting point/freezing point
Boiling point / boiling range

Values
1.9, pH 1% solution
No information available
No information available

Remarks • Method

Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity	1.146
Water solubility	Soluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Avoid contact with metals, stoneware, strong acids and alkalies, explosives, toxicants, readily oxidizable materials, alkali metals, combustible solids, and organic peroxides.

Hazardous Decomposition Products

When heated to decomposition (222°F), it emits highly toxic and corrosive fumes of hydrofluoric acid, silicon tetrafluoride and hydrogen gas.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	No data available
Inhalation	May cause irritation of respiratory tract. Causes burns.
Eye contact	Risk of serious damage to eyes.
Skin Contact	Contact causes severe skin irritation and possible burns.
Ingestion	May be fatal if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Fluorosilicic acid 16961-83-4	= 125 mg/kg (Rat)	-	= 1.11 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Fluorosilicic acid 16961-83-4	-	Group 3	-	-

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2500 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Fluorosilicic acid 16961-83-4	-	65: 96 h Poecilia reticulata mg/L LC50 static 28.7: 96 h Pimephales promelas mg/L LC50 static	-

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical Name	California Hazardous Waste Status
Fluorosilicic acid 16961-83-4	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT	Regulated
UN/ID No.	UN1778
Proper shipping name	Fluorosilicic Acid
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Fluorosilicic acid 16961-83-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	Health hazards 3	Flammability 0	Instability 1	Physical and Chemical Properties -
HMIS	Health hazards 3	Flammability 0	Physical hazards 1	Personal protection X

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 Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet