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Version 1

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Name** SOUR PLUS**Other means of identification****Product Code** 259  
**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**

<b>General advice</b>	Immediate medical attention is required.
<b>Eye contact</b>	Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Self-protection of the first aider</b>	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 (CO<sub>2</sub>).

**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 <sup>3</sup> F	TWA: 2.5 mg/m <sup>3</sup> F TWA: 2.5 mg/m <sup>3</sup> dust (vacated) TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> 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  
105.6 °C / 222 °F

#### **Remarks • Method**

<b>Flash point</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Specific Gravity</b>	1.166
<b>Water solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	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 alkalis, 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**

<b>Product Information</b>	No data available
<b>Inhalation</b>	May cause irritation of respiratory tract. Causes burns.
<b>Eye contact</b>	Risk of serious damage to eyes.
<b>Skin Contact</b>	Contact causes severe skin irritation and possible burns.
<b>Ingestion</b>	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

<b>DOT</b>	Regulated
<b>UN/ID No.</b>	UN1778
<b>Proper shipping name</b>	Fluorosilicic Acid, Solution
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	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**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	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**

<b>Chemical Name</b>	<b>New Jersey</b>	<b>Massachusetts</b>	<b>Pennsylvania</b>
Fluorosilicic acid 16961-83-4	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not Applicable

**16. OTHER INFORMATION**

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

Prepared By Imt  
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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**