1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name Solid Green 84 Iron Removing System

Other means of identification

Product Code(s) 7945
UN-Number UN3260
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Laundry Neutralizer
Uses advised against No information available

Supplier's details

Supplier Address
Sunburst Chemicals, Inc.
220 W. 86th St.
Bloomington, MN 55420
TEL: 952-884-3144

Emergency telephone number

Emergency Telephone Number 1-866-303-6943

2. HAZARDS IDENTIFICATION

Classification

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

Acute Oral Toxicity Category 4
Skin Corrosion/Irritation Category 1 Subcategory 1B
Serious Eye Damage/Eye Irritation Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word Danger
Hazard Statements
• Harmful if swallowed
• Causes severe skin burns and eye damage
Appearance: Blue  
Physical State: Solid  
Odor: Pleasant

Precautionary Statements

Prevention
• Wash face, hands and any exposed skin thoroughly after handling
• Do not eat, drink or smoke when using this product
• Do not breathe dust/fume/gas/mist/vapors/spray
• Wear protective gloves/protective clothing/eye protection/face protection

General Advice
• Immediately call a POISON CENTER or doctor/physician

Eyes
• 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.

Skin
• IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
• Wash contaminated clothing before reuse

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

Ingestion
• IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
• Rinse mouth
• Do NOT induce vomiting

Storage
• Store locked up

Disposal
• Dispose of contents/container to an approved waste disposal plant

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information
Toxic to aquatic life

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>77-92-9</td>
<td>15-40</td>
<td>*</td>
</tr>
<tr>
<td>Ammonium bifluoride</td>
<td>1341-49-7</td>
<td>3 -7</td>
<td>*</td>
</tr>
</tbody>
</table>

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

Description of necessary first-aid measures

General Advice
Immediate medical attention is required.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.

Skin Contact
Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Seek immediate medical attention/advice.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion
Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects
No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Carbon dioxide (CO₂). Dry chemical. Keep containers and surroundings cool with water spray.

Unsuitable Extinguishing Media
None

Specific Hazards Arising from the Chemical
Sealed containers may rupture when heated. Spills produce extremely slippery surfaces.

Hazardous Combustion Products
May release hydrogen fluoride with high heating.

Explosion Data

<table>
<thead>
<tr>
<th>Sensitivity to Mechanical Impact</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to Static Discharge</td>
<td>None</td>
</tr>
</tbody>
</table>

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
If spilled, take caution, as material can cause surfaces to become very slippery. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions
Avoid release to the environment. Collect spillage. See Section 12 for additional Ecological Information. Dispose of contents/container to an approved waste disposal plant. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.
Methods and materials for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up
Neutralize with soda ash or sodium bicarbonate over area of spill. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage
Keep container tightly closed. Keep container closed when not in use. Keep out of the reach of children.

Incompatible Products
Chlorine-based bleaching agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride 1341-49-7</td>
<td>TWA: 2.5 mg/m³ F</td>
<td>TWA: 2.5 mg/m³ F</td>
<td>TWA: 2.5 mg/m³ F</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Tightly fitting safety goggles.

Skin and Body Protection
Rubber gloves. Rubber apron.

Respiratory Protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures
Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/ - Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Pleasant</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>1</td>
<td>None known</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>None</td>
<td>None known</td>
</tr>
<tr>
<td>Flash Point</td>
<td>None</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
</tbody>
</table>
### Flammability Limits in Air
- Upper flammability limit: No data available
- Lower flammability limit: No data available

### Vapor Pressure
- No data available

### Relative Density
- No data available

### Specific Gravity
- No data available

### Water Solubility
- Soluble

### Solubility in other solvents
- No data available

### Partition coefficient: n-octanol/water
- No data available

### Autoignition Temperature
- No data available

### Decomposition Temperature
- No data available

### Viscosity
- No data available

### Flammable Properties
- Not flammable

### Explosive Properties
- Not explosive

### Oxidizing Properties
- Not an oxidizer

### Other information

#### VOC Content (%)
- 0%

---

### 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

None known based on information supplied.

#### Incompatible materials

Chlorine-based bleaching agents.

#### Hazardous decomposition products

Chlorine gas.

---

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation of respiratory tract.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Eye contact with corrosive substances can cause eye burns.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>Skin contact with corrosive substances can cause skin burns.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed. Can burn mouth, throat, and stomach.</td>
</tr>
</tbody>
</table>

---

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Symptoms related to the physical, chemical and toxicological characteristics

Symptoms
No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization
No information available.

Mutagenic Effects
No information available.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IARC: (International Agency for Research on Cancer)
Group 3: Not Classifiable as to its Carcinogenicity to Humans

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

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

<table>
<thead>
<tr>
<th>Product</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
</tr>
</thead>
<tbody>
<tr>
<td>mg/kg</td>
<td>mg/kg</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity estimate</td>
<td>Acute toxicity estimate</td>
<td></td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods
Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging
Dispose of in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT
- UN-Number: UN3260
- Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.
- Hazard Class: 8
- Packing Group: II
- Reportable Quantity (RQ)
  - Ammonium bifluoride: RQ kg = 687.88
- Description
  - UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Ammonium bifluoride), 8, II, RQ
- Emergency Response Guide Number
  - 154

15. REGULATORY INFORMATION

International Inventories
- TSCA: Complies
- DSL: Complies
- EINECS: Complies
- 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 Commercial Chemical Substances/EU List of Notified 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

U.S. Federal Regulations
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride</td>
<td>1341-49-7</td>
<td>3-7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride</td>
<td>100 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td></td>
<td></td>
<td>RQ Section Number 180.950</td>
</tr>
<tr>
<td>Ammonium bifluoride</td>
<td>100 lb</td>
<td></td>
<td>RQ 100 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 45.4 kg final RQ</td>
</tr>
</tbody>
</table>

U.S. State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium bifluoride</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable
### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>D</td>
</tr>
</tbody>
</table>

**Prepared By**

Sunburst Chemicals  
220 West 86th Street  
Bloomington, MN 55420  
952-884-3144

**Issuing Date**

07-Jan-2014

**Revision Date**

07-Jan-2014

**Revision Note**

New Issue

**General Disclaimer**

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet