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

Product Name
TRU-BRITE

Other means of identification
Product Code 8804
UN/ID No. UN3264
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Silicate remover.
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
Acute toxicity - Oral Category 4
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
Harmful if swallowed
Causes severe skin burns and eye damage
May be corrosive to metals

Appearance aqueous solution
Physical state liquid
Odor Strong

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
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: Call a POISON CENTER or doctor/physician if you feel unwell
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
- Harmful to aquatic life with long lasting effects
Unknown Acute Toxicity 1% of the mixture consists of ingredient(s) of unknown toxicity

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>Ammonium bifluoride</td>
<td>1341-49-7</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Sulfamic acid</td>
<td>5329-14-6</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Dipropylene Glycol Methyl Ether</td>
<td>34590-94-8</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

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

4. FIRST AID MEASURES

First aid measures

Eye contact
Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention. If a physician is not available immediately, rinse for an additional 15 minutes.

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.

Most important symptoms and effects, both acute and delayed
Symptoms
Corrosive. May cause burns or irritation to eyes and skin. Vapors may cause burns to lungs and mucous membranes. Irreversible eye damage may occur in some cases. Hydrofluoric acid will penetrate skin & attack underlying tissues & bone. Large burns (25 sq. in.) may cause hypocalcemia.

Indication of any immediate medical attention and special treatment needed
Note to physicians
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
If the stock solution container breaks, the solution should be handled with care as it is corrosive. Contact with metals may evolve flammable hydrogen gas. Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

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.

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.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation.

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.

Incompatible materials
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/m² F</td>
<td>TWA: 2.5 mg/m² F</td>
<td>TWA: 2.5 mg/m² F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 2.5 mg/m² dust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 2.5 mg/m²</td>
<td></td>
</tr>
<tr>
<td>Dipropylene Glycol Methyl Ether 34590-94-8</td>
<td>STEL: 150 ppm</td>
<td>TWA: 100 ppm</td>
<td>IDLH: 600 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA: 100 ppm</td>
<td>TWA: 600 mg/m³</td>
<td>TWA: 100 ppm</td>
</tr>
<tr>
<td></td>
<td>S*</td>
<td>(vacated) TWA: 600 mg/m³</td>
<td>TWA: 600 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 150 ppm</td>
<td>STEL: 150 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 900 mg/m³</td>
<td>STEL: 900 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

- Eye/face protection: Goggles. Face protection shield.
- 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: Handle in accordance with good industrial hygiene and safety practice.

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>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>aqueous solution</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>clear green</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Strong</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td>1% Solution</td>
</tr>
<tr>
<td>pH</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.180</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble in water</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
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
Corrodes most metals.

Incompatible materials

Hazardous Decomposition Products
Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
No data available

Inhalation  Causes burns.
Eye contact  Risk of serious damage to eyes.
Skin Contact  Corrosive.
Ingestion  Very toxic if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride 1341-49-7</td>
<td>= 130 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sulfamic acid 5329-14-6</td>
<td>= 1450 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dipropylene Glycol Methyl Ether 34590-94-8</td>
<td>= 5230 mg/kg (Rat)</td>
<td>= 9500 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

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.

<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>

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

Unknown Acute Toxicity  1% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document.
ATEmix (oral) 813 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity
16% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfamic acid</td>
<td>5329-14-6</td>
<td>14.2: 96 h Pimephales promelas</td>
<td>mg/L LC50 static</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5329-14-6</td>
<td></td>
</tr>
<tr>
<td>Dipropylene Glycol Methyl Ether</td>
<td>34590-94-8</td>
<td>10000: 96 h Pimephales promelas</td>
<td>1919: 48 h Daphnia magna</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mg/L LC50 static</td>
<td>mg/L LC50</td>
</tr>
</tbody>
</table>

Persistence and degradability  No information available.
Bioaccumulation  No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipropylene Glycol Methyl Ether</td>
<td>-0.064</td>
</tr>
<tr>
<td>34590-94-8</td>
<td></td>
</tr>
</tbody>
</table>

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.

14. TRANSPORT INFORMATION

DOT  Regulated
UN/ID No.  UN3264
Proper shipping name  Compounds, Cleaning Liquid
Hazardous ingredients  Sulfamic Acid / Hydrofluoric Acid
Hazard Class  8
Packing Group  II
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Complies</th>
<th>Does not comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENCS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IECSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AICS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride - 1341-49-7</td>
<td>1.0</td>
</tr>
<tr>
<td>Dipropylene Glycol Methyl Ether - 34590-94-8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute health hazard: Yes
Chronic Health Hazard: Yes
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)

<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 1341-49-7</td>
<td>100 lb</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride 1341-49-7</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>
US 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>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bifluoride</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1341-49-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfamic acid</td>
<td>X</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>5329-14-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dipropylene Glycol Methyl Ether</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>34590-94-8</td>
<td></td>
<td></td>
<td></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 hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Prepared By  lmt
Issue Date    08-Jun-2015
Revision Date 08-Jun-2015
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