SAFETY DATA SHEET

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

Product Name GEMINI A-1000

Other means of identification
Product Code 299
UN/ID No. UN1760
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Liquid Acid One-Step Cleaner.
Uses advised against PREVENT DISPERSION OF MISTS!

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

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1 Sub-category B</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Corrosive to metals</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

Emergency Overview

Danger

Hazard statements
Toxic if inhaled
Causes severe skin burns and eye damage
May be corrosive to metals

Appearance aqueous solution Physical state liquid Odor None

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Keep only in original container
Use only in well-ventilated areas
Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements - Response
Specific treatment (see Section 4 on this label)
Immediately call a POISON CENTER or doctor/physician
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 well-ventilated place. Keep container tightly closed
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
• Toxic to aquatic life with long lasting effects
• Toxic to aquatic life
Unknown Acute Toxicity 1.9% 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>Phosphoric acid</td>
<td>7664-38-2</td>
<td>26.2</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</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.

Skin Contact
Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse.

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. Causes tissue destruction, permanent damage to the cornea, blindness. Causes irritation (possibly severe), burns to the skin. Mists may cause lung irritation, shortness of breath, fluid in lungs. Ingestion causes nausea, vomiting, diarrhea, corrosion, burns to mouth and esophagus, abdominal pain, chest pain, shortness of breath, seizures, death.

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.

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.

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.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep containers tightly closed and properly labeled. This product reacts violently with bases liberating heat and causes spattering. Store in a cool, dry, well-ventilated area. 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: Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur trioxide, and phosphorus pentoxide.

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>Phosphoric acid</td>
<td>STEL: 3 mg/m³ TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³</td>
<td>TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³</td>
<td>IDLH: 1000 mg/m³ TWA: 1 mg/m³ (vacated) STEL: 3 mg/m³</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>TWA: 0.2 mg/m³ thoracic fraction</td>
<td>TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³</td>
<td>IDLH: 15 mg/m³ TWA: 1 mg/m³</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>TWA: 1 ppm</td>
<td>TWA: 1 ppm (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m³</td>
<td>IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m³</td>
</tr>
<tr>
<td>7722-84-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 suitable protective clothing. Rubber gloves.
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

| Property                        | Values                     | Remarks • Method                           |
|                                |                           |                                        |
| Physical state                 | liquid                     |                                          |
| Appearance                     | aqueous solution           |                                          |
| Color                          | clear colorless            |                                          |
| Odor                           | None                       |                                          |
| Odor threshold                 | No information available   |                                          |
| pH                             | <1                         |                                          |
| Melting point/freezing point   | No information available   |                                          |
| Boiling point / boiling range  | No information available   |                                          |
| 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               | 1.222                      |                                          |
| Water solubility               | Soluble in water           |                                          |
| Solubility in other solvents   | No information available   |                                          |
| Partition coefficient          | 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
Incompatible materials.

Incompatible materials
Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur tioxide, and phosphorus petoxide.

Hazardous Decomposition Products
At flame temperatures, toxic phosphoric oxide fumes may be emitted. Oxygen. Releases sulfur dioxide at extremely high temperatures.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
No data available

Inhalation
May cause irritation of respiratory tract.

Eye contact
Corrosive to the eyes and may cause severe damage including blindness.

Skin Contact
Contact causes severe skin irritation and possible burns.

Ingestion
No data available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>1530 mg/kg (Rat)</td>
<td>2730 mg/kg (Rabbit)</td>
<td>&gt; 850 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>2140 mg/kg (Rat)</td>
<td>-</td>
<td>510 mg/m³ (Rat) 2 h</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>801 mg/kg (Rat)</td>
<td>4060 mg/kg (Rabbit)</td>
<td>2000 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>7722-84-1</td>
<td></td>
<td></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>Sulfuric acid 7664-93-9</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>Hydrogen peroxide 7722-84-1</td>
<td>A3</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
1.9% 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) 4089 mg/kg
- ATEmix (dermal) 10420 mg/kg
- ATEmix (inhalation-dust/mist) 0.7 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

1.9% 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>Phosphoric acid 7664-38-2</td>
<td>-</td>
<td>3 - 3.5: 96 h Gambusia affinis mg/L LC50</td>
<td>4.6: 12 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>-</td>
<td>500: 96 h Brachydania rerio mg/L LC50 static</td>
<td>29: 24 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Hydrogen peroxide 7722-84-1</td>
<td>2.5: 72 h Chlorella vulgaris mg/L EC50</td>
<td>16.4: 96 h Pimephales promelas mg/L LC50 static</td>
<td>7.7: 24 h Daphnia magna mg/L EC50 18 - 32: 48 h Daphnia magna mg/L EC50 Static</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid 7664-38-2</td>
<td>Corrosive</td>
</tr>
</tbody>
</table>
Sulfuric acid
7664-93-9
Hydrogen peroxide
7722-84-1

14. TRANSPORT INFORMATION

DOT
- UN/ID No.: UN1760
- Proper shipping name: Corrosive Liquid, N.O.S.
- Hazardous ingredients: (Phosphoric Acid / Sulfuric Acid)
- Hazard Class: 8
- Packing Group: III

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid 7664-93-9</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
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>Phosphoric acid</td>
<td>5000 lb</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>1000 lb</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
<td></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>Phosphoric acid</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>1000 lb</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td></td>
<td>1000 lb</td>
<td></td>
</tr>
<tr>
<td>7722-84-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
</tr>
</tbody>
</table>

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>Phosphoric acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7722-84-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. EPA Label Information
EPA Pesticide Registration Number  Not Applicable

16. OTHER INFORMATION

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

Prepared By lmt
Issue Date 20-Oct-2014
Revision Date 04-Dec-2014
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