1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

Product Name .................. Record Alum Hardening Converter
Catalog Number ............... N/A
Chemical Name ............... Mixture
Common Name ................ N/A
Product Use .................. Hardener for photographic film and prints.

MANUFACTURER

Sprint Systems of Photography, Inc.
100 Dexter Street
Pawtucket, R.I. 02860
800 356-5073

EMERGENCY TELEPHONE NUMBER

ChemTel (1-800-255-3924)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum sulfate</td>
<td>10043-01-3</td>
<td>N/E</td>
<td>2 mg/m³ (soluble aluminum)</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>10 ppm</td>
<td>10 ppm (TWA) · 15 ppm (STEL)</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

See Section 15 for OSHA Regulatory Status

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear solution with a slight sulfur dioxide odor. asthma-like symptoms. May be harmful if swallowed.
Danger! Causes permanent eye damage. Breathing vapors or mist may cause irritate the respiratory tract or cause
In case of fire use foam, carbon dioxide, \( CO_2 \), or dry chemical.

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE(S) OF ENTRY

Inhalation (breathing), skin and eye contact.

Ingestion: Harmful if swallowed.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

No information found.

REPORTED AS CARCINOGEN OR POTENTIAL CARCINOGEN

\[ \text{Yes Applicable} \]
\[ \text{OSHA Suspect Carcinogen} \]
\[ \text{National Toxicology Program (NTP)} \]
\[ \text{International Agency for Research on Cancer (IARC)} \]

4. FIRST AID MEASURES

Skin contact: Wash affected areas with plenty of running water, and soap if available, for several minutes. Seek medical attention if irritation develops and persists.

Eye contact: Immediately rinse eyes with water. Remove any contact lenses, and continue flushing eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of
the entire surface of the eyes and lids with water. Get immediate medical attention.

**Inhalation:** Remove from area to fresh air. If not breathing, clear airway and start mouth-to-mouth artificial respiration or use a bag-mask respirator. Get immediate medical attention. If victim is having trouble breathing, transport to medical care and, if available, give supplemental oxygen.

**Ingestion:** Give 3-4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Get medical attention to determine whether vomiting or evacuation of stomach is necessary. Do not give anything by mouth to an unconscious or convulsing person.

5. **FIRE FIGHTING MEASURES**

**Flash Point and Method** . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . >200 °F (closed cup)

**GENERAL HAZARD**

None known.

**EXTINGUISHING MEDIA**

In case of fire use foam, carbon dioxide, (CO₂), or dry chemical.

6. **ACCIDENTAL RELEASE MEASURES**

Wear appropriate protective equipment (See Section 8). Do not get in eyes. Avoid contact with skin or clothing. Absorb in vermiculite, dry sand or earth and place into containers. Small spills may be flushed into sewers with plenty of water.

7. **HANDLING AND STORAGE**

**HANDLING**

Wear appropriate protective equipment (See Section 8). Do not get in eyes. Avoid contact with skin or clothing

**STORAGE**

Keep in a tightly closed container, stored in a cool, dry, ventilated area.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS**

Use engineering controls to reduce air contamination to permissible exposure level.

**PERSONAL PROTECTION**

**Respirator:** In conditions where high concentrations of vapors are present or exposure limits are exceeded, wear a respirator that has been selected by technically qualified person for the specific work conditions.

**Eye Protection:** Wear approved safety goggles.

**Gloves:** Neoprene.

**Clothing:** Wear long-sleeved clothing. Use rubber apron. Use rubber boots.

**Other:** Eye wash; safety shower.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight sulfur dioxide</td>
</tr>
<tr>
<td>Melting Point °F</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point °F</td>
<td>&gt; 212</td>
</tr>
<tr>
<td>Specific Gravity @ 25 °F</td>
<td>1.158</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>0.6</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>N/D</td>
</tr>
<tr>
<td>pH</td>
<td>2.15</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Solubility in other liquids</td>
<td>N/D</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

REACTIVITY
Stable

HAZARDOUS DECOMPOSITION PRODUCTS
Sulfur dioxide, sulfur trioxide, sulfuric acid vapor/mist

INCOMPATIBILITIES
Alkaline materials, strong oxidizers, metals, organic materials and cyanide containing materials.

CONDITIONS TO AVOID
Excessive heat

11. TOXICOLOGICAL INFORMATION

For Acetic acid:
1 hr. Inhalation LC_{50} Mouse: 5260 ppm
Oral LD_{50} Rat: 3310 mg/kg
Dermal LD_{50} Rabbit: 1060 µL/kg

The product is not a skin irritant. The primary dermal irritation score was 0.54 following a 4-hour occluded dermal exposure in a modified FHSA/CPSC Design, 16 CFR 1500.

For Aluminum sulfate:
Oral LD_{50} Mouse: 6207 mg/kg

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
For Acetic acid:
LC_{50} (96 hr) fathead minnow: 88 mg/L. Conditions:
Static, 18-22 °C.
LC_{50} (96 hr) bluegill sunfish: 75 mg/L.
LC_{50} (24 hr) goldfish: 423 mg/L.
EC_{50} (5, 15, 25 min) Photobacterium phosphoreum:
8.86-11 mg/L. Microtox test. Conditions: 15 °C.
EC_{50} (24-48 hr) water flea: 32-47 mg/l

For Aluminum sulfate:
LC_{50} (12-96 hr) goldfish: 100 mg/l

ENVIRONMENTAL MOVEMENT AND PARTITIONING
None known

ENVIRONMENTAL FATE
None known

13. DISPOSAL CONSIDERATIONS

For product as sold:
RCRA Waste Code: ............... D001.

For product as used:

14. TRANSPORT INFORMATION

For 4 L and 1 L containers:
DOT Proper Shipping Name: ...... Consumer commodity
DOT Hazard Class ............... ORM-D
DOT I.D. Number ............... N/A
Packing Group ....................... N/A
Marking ....................... ORM-D
NAERG Guide No. ............... N/A

15. REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

☑️ Hazardous ☐ Non-Hazardous

CERCLA/SUPERFUND (40 CFR 117, 302)
Acetic acid; reportable quantity - 5,000 lbs.
Aluminum sulfate; reportable quantity - 5,000 lbs.
SARA EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355)
N/A

SARA HAZARD CATEGORIES (40 CFR 370)

- Acute
- Chronic
- Fire
- Pressure
- Reactive
- None

SARA TOXIC CHEMICALS (40 CFR 372)
N/A

SARA HAZARD CATEGORIES

INVENTORY STATUS
All ingredients of this product are on the TSCA inventory

STATE REGULATIONS
Florida Hazardous Substance List . . . Acetic acid
Massachusetts Right To Know List . . Acetic acid and aluminum sulfate
Minnesota Hazardous Substance List . Acetic acid
New Jersey Right To Know List . . . Acetic acid and aluminum sulfate

16. OTHER INFORMATION

NFPA RATING

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Fire</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

ABBREVIATIONS

C - Ceiling limit
N/A - Not applicable
N/D - Not determined
N/E - Not established
N/K - Not known

PREPARATION INFORMATION

Prepared by: Sprint Systems of Photography, Inc.
Date Revised: June 21, 2000
Replaces: January 13, 2000

REVISION INFORMATION

Sections 3, 4, 6, 7, 11 and 16 were updated to reflect results of a dermal irritation study.

PREPARED BY: Sprint Systems of Photography, Inc.
DATE REVISED: June 21, 2000
REPLACES: January 13, 2000

REVISION INFORMATION
Sections 3, 4, 6, 7, 11 and 16 were updated to reflect results of a dermal irritation study.