SPRINT®
SYSTEMS OF PHOTOGRAPHY

RECORD ALUM HARDENING

MATERIAL SAFETY DATA SHEET

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.
1057 Chopmist Hill Road
Scituate, RI 02857
800 356-5073

EMERGENCY TELEPHONE NUMBER

ChemTel (1-800-255-3924)

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	EXPOSURE CONTROLS	
		OSHA PEL	ACGIH TLV
Aluminum sulfate	10043-01-3	N/E	2 mg/m^3 (soluble aluminum
Acetic acid	64-19-7	10 ppm	10 ppm (TWA) - 15 ppm (STEL)
Water	7732-18-5	N/A	N/A

See Section 15 for OSHA Regulatory Status

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear solution with a slight sulfur dioxide odor.

Danger! Causes permanent eye damage. Breathing vapors or mist may cause irritate the respiratory tract or cause asthma-like symptoms. May be harmful if swallowed.

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.

SYMPTOMS OF EXPOSURE

Skin Contact: May cause mild irritation.

Eye Contact: Causes permanent eye damage When prepared for use, causes irritation.

Inhalation: May cause respiratory tract irritation, seen as soreness in throat, nose, and respiratory tract. Breathing vapors or mist may cause asthma-like symptoms.

Ingestion: Harmful if swallowed.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

No information found.

REPORTED AS CARCINOGEN OR POTENTIAL CARCINOGEN

✓ Not Applicable
_ OSHA Suspect Carcinogen
_ National Toxicology Program (NTP)
_ 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, (CO_2), or dry chemical.

SPECIAL FIREFIGHTING INSTRUCTIONS

None known.

FIREFIGHTING EQUIPMENT

As in any fire, wear NIOSH approved, positive-pressure self-contained breathing apparatus and full protective gear.

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

State	Liquid
Color	Clear
Odor	Slight sulfur dioxide
Melting Point ˚F	N/A
Boiling Point ˚F	> 212
Specific Gravity @ 25 ˚F	1.158
Vapor Density (Air = 1)	0.6
Vapor Pressure (mm Hg)	N/D
pH	2.15 5.1 (when mixed with fixer)
Water Solubility	Soluble
Solubility in other liquids	N/D

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

For Aluminum sulfate:

Oral LD_{50} Mouse: 6207 mg/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.

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:

RCRA Waste Code: . . . . . Not regulated.

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

TSCA CHEMICAL SPECIFIC RULES

N/A

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

Health	3
Fire	1
Reactivity	0

ABBREVIATIONS

C - Ceiling limit
N/A - Not applicable
N/D - Not determined
N/E - Not established
N/K - Not known
NAERG - North American Emergency Response Guidebook
RQ - Reportable Quantity
TPQ - Threshold Planning Quantity

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.