

# MATERIAL SAFETY DATA SHEET

FI Sales, LLC.

Product: **X-ray Film Fixer Solution**Revision Date: **1/3/2008**

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## 1. CHEMICAL PRODUCT & COMPANY INFORMATION

Product Identifier: **X-ray Film Fixer solution, Ready-To-Use strength**General Use: **Processing (image fixing & silver removal) of exposed X-Ray Film for viewing and storage**

Manufactured in the U.S.A. for:

FI Sales, LLC., 761 N. 17th Street, Unit 17, St. Charles, Illinois 60174 (U.S.A.)

Business Hours Phone: (630) 444 - 1380

FAX: (630) 444 - 1381

**Chemical Emergency only, 24 Hour / 7 Day Response Phone: (800) 535-5053 & (352) 323 - 3500 INFOTRAC**

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS No.	% by Wt.	Exposure Limits (ppm)		ACGIH	
			OSHA TWA	OSHA PEL	TLV	STEL
Ammonium Thiosulfate	7763-18-8	12 - 15	N/Est	N/Est	N/Est	N/Est
(Ammonia, potential off-gas)	7664-41-7		50	N/Av	25	35
Acetic Acid	64-19-7	1 - 2.5	N/Est	10	10	15
Sodium Sulfite	7757-83-7	1 - 2.5	N/Est	N/Est	N/Est	N/Est
(Sulfur Dioxide, potential off-gas)	7446-09-5		5	N/Av	2	5
N/Est = Not Established		N/Av = Not Available		(s) = skin contact limit		(c) = ceiling limit

## 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Not Regulated as liquid product. Harmful or fatal if swallowed.

### POTENTIAL HEALTH EFFECTS:

**INHALATION:** Fumes and vapors in areas at 75°F or cooler with good ventilation are mildly irritating to upper respiratory tract. Avoid using product in confined spaces without ventilation or with much warmer temperatures. Inhalation of liquid or mist, or dusts of dried product will cause same effects as "SKIN CONTACT" or "INGESTION" to body and respiratory system tissues.**EYE CONTACT:** Will cause severe irritation. May cause chemical burns or corneal damage.**SKIN CONTACT:** Avoid contact with liquid, mists, or spray to skin. Typically no ill effects for most people with occasional minor unprotected contact. Can be absorbed through skin and produce similar effects as INGESTION.**INGESTION:** Harmful or fatal if swallowed. Will cause severe distress (violent colic, diarrhea, spontaneous vomiting) of the gastrointestinal tract. Circulatory disturbances. Central Nervous System (CNS) depression. Potential aspiration hazard. Potential anaphylactic shock by allergic or asthmatic persons.**CHRONIC:** This product does NOT contain any ingredient designated by IARC, NTP, ACGIH, or OSHA as probable or suspected human carcinogen.

## 4. FIRST AID MEASURES

**INHALATION (of fumes):** Remove patient to fresh air if dizzy or other symptoms. If breathing has stopped, give cardio-pulmonary respiration (CPR) and call for medical assistance.**EYE CONTACT:** Flush with water for at least 15 minutes. Get medical attention immediately.**SKIN CONTACT:** Wash with soap and water after removing contaminated clothing. Provide extra attention to hair and other not easy to clean areas. Get medical attention if irritation occurs or immediately if the skin contact area was large or prolonged.**INGESTION:** Prevent aspiration of vomit into lungs. Induce vomiting immediately of conscious patient, and dilute stomach contents with water. Get medical attention immediately.

## 5. FIRE FIGHTING INFORMATION AND MEASURES

**FLASH POINT:** Product is Not Flammable**METHOD:** None**AUTOIGNITION TEMPERATURE:** N/Av**FLAMMABLE LIMITS:** N/Av**HAZARDOUS COMBUSTION PRODUCTS:** NONE. Thermal decomposition of liquid will release Ammonia gas and Sulfur dioxide. After the liquid has evaporated, there may be other unknown organic and inorganic potentially toxic or corrosive combustion by-product compounds.**EXTINGUISHING MEDIA RECOMMENDED:** None specifically required for this product. Media used should be controlled by other materials involved in fire.**FIRE FIGHTING INSTRUCTIONS:** Wear self-contained breathing apparatus and full protective equipment for all indoor and outdoor fires.

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Neutralize pH of liquid with weak alkali base such as sodium carbonate or baking soda. Absorb with inert absorbent and place in chemical resistant liquid-proof container. Only small quantities may be rinsed down sanitary sewer.

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**LARGE SPILL:** Dike spill and contain to prevent run-off. Do NOT contaminate natural waterways (high nitrogen content). Neutralize pH of liquid with alkali / base. Transfer liquid to chemically resistant liquid storage containers. Dispose at a licensed facility according to all applicable regulations.

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## 7. HANDLING AND STORAGE

**HANDLING:** Use in a well-ventilated area away from extreme heat. Avoid creating mist or spray. Keep containers closed. Wear protective equipment and clothing. Wash hands and gloves thoroughly after handling containers or contact with solution.

**STORAGE:** Keep in well-ventilated areas between 40°F and 90°F.

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## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** General or local exhaust should be used as required to keep vapors below exposure limits.

**RESPIRATORY PROTECTION:** If vapor concentration exceeds allowable exposure limits or as general safety precaution, use a NIOSH/MSHA approved acid vapor cartridge (Sulfur Dioxide), canister respirator, self-contained breathing equipment or supplied air breathing equipment if exposure limits are exceeded. Follow the OSHA guidelines in 29 CFR 1910.134.

**SKIN PROTECTION:** Use impervious gloves and an impervious gown (or impervious apron and sleeves).

**EYE PROTECTION:** Use chemical splash goggles. A face shield should also be used if splashes to the face can be expected.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Range:** 220°F +

**Vapor Pressure:** 18mm Hg @ 20°C

**Solubility in Water:** total / 100%

**Odor:** Sulfurous / acetate odor

**Appearance:** Transparent liquid with slight yellow/green tint

**Melting Point:** 30°F

**Vapor Density (Air = 1):** 0.6

**Specific Gravity:** 1.1 - 1.2

**% Volatile by Volume:** 80%

**pH:** 5.0 - 6.0

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## 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY (Conditions to avoid):** Extreme heat.

**INCOMPATIBILITY:** Strong bases, reducing agents, aluminum alloys, magnesium alloys, zinc alloys.

**HAZARDOUS DECOMPOSITION:** Ammonia fumes, Sulfur oxides (SO, SO<sub>2</sub>, and SO<sub>3</sub>) fumes.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

No specific data for this product.

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## 12. ECOLOGICAL INFORMATION

No specific data for this product combination, but Biological Oxygen Demand is expected to be high with high Nitrogen content.

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## 13. DISPOSAL CONSIDERATIONS

See Section 6.

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## 14. TRANSPORTATION INFORMATION

**U.S. DOT:** Product is not regulated.

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## 15. REGULATORY INFORMATION

**TSCA INVENTORY of CHEMICAL SUBSTANCES STATUS:** YES, ALL LISTED

Ammonium Thiosulfate, 7763-18-8 12% - 15%

Ammonia (potential off-gas) 7664-41-7

Acetic Acid, 64-19-7 1% - 2.5%

Sodium Sulfite, 7757-83-7 1% - 2.5%

Sulfur Dioxide, (potential off-gas) 7446-09-5

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## 16. OTHER INFORMATION

**NFPA HAZARD RATING:** Health 2(s), Fire 1, Reactivity 1

**KEY:** (4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Minimal)

(s) = Skin contact may significantly add to the overall exposure

**NOTICE:** The information herein is presented in good faith and believed to be accurate and complete as of the effective date shown above. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities with this product and its disposal comply with all federal, state, and local laws, and of the resident country.