

# MATERIAL SAFETY DATA SHEET

AGFA CORPORATION  
100 Challenger Road  
Ridgefield Park, NJ 07660

|                             |  |
|-----------------------------|--|
| TRANSPORTATION EMERGENCY    | NON-TRANSPORTATION                       |
| CALL CHEMTREC: 800-424-9300 | HEALTH EMERGENCY PHONE..: (303) 623-5716 |
| INTERNATIONAL: 703-527-3887 | AGFA INFORMATION PHONE..: (201) 440-2500 |

**1. CHEMICAL PRODUCT IDENTIFICATION:**

PRODUCT NAME.....: G-353C Fixer Part A  
PRODUCT CODE.....: FSE4Z000  
CHEMICAL FAMILY.....: Aqueous Photochemical Solution  
BUSINESS GROUP.....: Technical Imaging Systems  
AGFA MSDS NUMBER....: 203ta.003

**2. COMPOSITION/INFORMATION ON INGREDIENTS:**

| INGREDIENT NAME<br>/CAS NUMBER | EXPOSURE LIMITS | CONCENTRATION (%) |
|--------------------------------|-----------------|-------------------|
|--------------------------------|-----------------|-------------------|

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\*\*\*\*\* HAZARDOUS INGREDIENTS \*\*\*\*\*  
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|                      |                            |         |
|----------------------|----------------------------|---------|
| Ammonium Thiosulfate |                            |         |
| 7783-18-8            | OSHA PEL : Not Established | 50-55 % |
|                      | ACGIH TLV: Not Established |         |
| Sodium Sulfite       |                            |         |
| 7757-83-7            | OSHA PEL : Not Established | 1-5 %   |
|                      | ACGIH TLV: Not Established |         |
| Boric Acid           |                            |         |
| 10043-35-3           | OSHA PEL : Not Established | 1-5 %   |
|                      | ACGIH TLV: Not Established |         |

**3. HAZARDS IDENTIFICATION:**

This product as a whole has not been tested. This hazard information is for the individual ingredients.

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*                               EMERGENCY OVERVIEW                               *
*                               *                                                 *
* WARNING! Color: Colorless; Form: Liquid; Clear; Odor:                       *
* Slight sulphur dioxide odor; May cause eye, skin, and                       *
* respiratory tract irritation; May cause allergic respiratory                 *
* reaction; May cause allergic skin reaction; Irritating                     *
* gases/fumes may be given off during burning or thermal                     *
* decomposition.                                                             *
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POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY.....: Eye and skin contact, inhalation of vapors or mists, accidental ingestion.

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE INHALATION.....: Inhalation of ammonium thiosulfate, sodium sulfite, and boric acid may be irritating to the respiratory tract with symptoms of sore throat, coughing, and runny nose. Sulfites may cause an allergic reaction in some asthmatics and sulfite sensitive individuals.

Possible symptoms include bronchoconstriction, sweating, flushing, hives, rapid heart rate, decreased blood pressure, and anaphylaxis.

CHRONIC INHALATION.....: Repeated or prolonged inhalation of boric acid may cause pain, nausea, vomiting, diarrhea, headache, confusion and drowsiness.

ACUTE SKIN CONTACT.....: Ammonium thiosulfate, sodium sulfite, and boric acid may be irritating to the skin with symptoms of reddening and itching. Abraded skin and moist skin may intensify these effects.

CHRONIC SKIN CONTACT.....: Repeated or prolonged contact to sulfites may cause an allergic skin reaction in sensitive individuals. Repeated or prolonged skin contact with boric acid may result in dermatitis.

ACUTE EYE CONTACT.....: Ammonium thiosulfate, sodium sulfite, and boric acid may be irritating to the eyes with symptoms of reddening, tearing, and stinging.

ACUTE INGESTION.....: Ingestion of sodium sulfite and ammonium thiosulfate may cause gastrointestinal irritation. If ingested, boric acid may cause damage to the gastrointestinal tract with pain, nausea, vomiting, diarrhea, headache, confusion and drowsiness. Ingestion may be fatal due to central nervous system depression, circulatory failure or renal failure. Liver and/or kidney damage may result from ingestion of boric acid.

CHRONIC INGESTION.....: Repeated ingestion of boric acid may cause effects similar to those mentioned in acute ingestion. Additional symptoms may include loss of appetite, reddening of the tongue, loss of hair and kidney injury.

REPRODUCTIVE EFFECTS.....: Boric Acid: Long-term high dose animal ingestion studies have shown reproductive effects. 1A human study of occupational exposure to borate dust showed no adverse effect to reproduction.

CARCINOGENICITY.....: The components of this product are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

#### MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: Persons with pre-existing eye, skin or respiratory conditions, kidney or liver disease, and nerve disorders may be more susceptible to the effects of this product.

#### 4. FIRST AID MEASURES:

FIRST AID FOR EYES.....: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

FIRST AID FOR SKIN.....: Flush affected areas promptly with water and soap for 15 minutes. Remove contaminated clothing. In case of continued irritation consult physician.

FIRST AID FOR INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

FIRST AID FOR INGESTION.: If swallowed, rinse mouth with plenty of water, call a Physician.

#### 5. FIRE FIGHTING MEASURES:

FLASH POINT.....: Noncombustible

EXTINGUISHING MEDIA.....: Material is not combustible. Use extinguishing media suitable for other combustible materials in the area.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus.

UNUSUAL FIRE / EXPLOSION HAZARDS: When heated to decomposition emission of toxic fumes of SO<sub>2</sub> is possible.

#### 6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES.....: Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Dike Spill. Prevent liquid from entering sewers, waterways, or low areas. Soak up with sawdust, sand, oil dry or other absorbent material. For disposal see section 13.

**7. HANDLING AND STORAGE:**

STORAGE TEMPERATURE(MIN/MAX): Store between 40 F (4.4 C) and 80 F (26 C).

Preferred storage is at 68 F (20 C).

SHELF LIFE.....: N.A.

SPECIAL SENSITIVITY.....: Keep from freezing.

HANDLING/STORAGE PRECAUTIONS: Avoid eye and skin contact, and store in well-ventilated area. Keep container tightly closed. Do not store with incompatible materials. Do not store or consume food, drink or tobacco in area where they may become contaminated with this material. For incompatibles see section 10.

OTHER NOTES.....: Keep out of the reach of children.

**8. PERSONAL PROTECTION:**

PROTECTIVE CLOTHING REQUIREMENTS...: Splash protection required for eyes, e.g., eye glasses with side shields or goggles. For skin protection use chemical resistant gloves and aprons, e.g. made of neoprene, rubber or vinyl.

VENTILATION REQUIREMENTS.....: Use sufficient general room ventilation and/or local exhaust to maintain airborne levels of vapors below applicable exposure limits (see Section 2).

RESPIRATOR REQUIREMENTS.....: Under normal conditions of use, respirator protection is not required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1010.134.

ADDITIONAL PROTECTIVE MEASURES.....: Emergency showers and eye wash stations should be made available. Educate and train employees in the safe use and handling of this product.

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

PHYSICAL FORM.....: Liquid

APPEARANCE.....: Clear

COLOR.....: Colorless

ODOR.....: Slight sulphur dioxide odor

pH .....: 5.4

BOILING POINT.....: Approx. 212 F (100 C)

MELTING/FREEZING POINT....: Not Established

SOLUBILITY IN WATER .....: Soluble

SPECIFIC GRAVITY .....: 1.35

BULK DENSITY.....: Not Established

% VOLATILE BY WEIGHT.....: Not Established

VAPOR PRESSURE .....: Not Established

**10. STABILITY AND REACTIVITY:**

STABILITY.....: This is a stable material.

HAZARDOUS POLYMERIZATION...: Will not occur.

INCOMPATIBILITIES.....: Strong alkali

INSTABILITY CONDITIONS.....: None Known

DECOMPOSITION PRODUCTS.....: Oxides of sulfur, CO<sub>2</sub>, carbon monoxide, ammonia

**11. TOXICOLOGICAL INFORMATION:**

NO ANIMAL TOXICITY INFORMATION AVAILABLE

**12. ECOLOGICAL INFORMATION:**

NO ECOLOGICAL INFORMATION AVAILABLE

**13. DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD.....: Recover nonusable free liquid and/or contaminated water, and dispose of in an approved and permitted treatment system. Remove nonusable solid material and/or contaminated soil, for disposal in an approved and permitted landfill. Discharge to sewer may require approval of permitting authority and may require pretreatment.

**14. TRANSPORTATION INFORMATION:**

TECHNICAL SHIPPING NAME.....: Aqueous Photochemical Solution  
 PRODUCT LABEL.....: G-353C Fixer Part A

DOT (DOMESTIC SURFACE)  
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HAZARD CLASS OR DIVISION .....: Non-Regulated

IMO / IMDG CODE (OCEAN)  
 -----

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

ICAO / IATA (AIR)  
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HAZARD CLASS DIVISION NUMBER...: Non-Regulated

**15. REGULATORY INFORMATION:**

OSHA STATUS.....: This product is hazardous under the criteria of  
 the Federal OSHA Hazard Communication Standard 29  
 CFR 1910.1200.

TSCA STATUS.....: On TSCA Inventory

CERCLA REPORTABLE QUANTITY..: None

SARA TITLE III:

SECTION 302 EXTREMELY

HAZARDOUS SUBSTANCES...: None

SECTION 311/312

HAZARD CATEGORIES.....: Immediate Health Hazard; Delayed Health Hazard

SECTION 313

TOXIC CHEMICALS.....: None

RCRA STATUS.....: If discarded in its purchased form, this product  
 would not be a hazardous waste either by listing  
 or by characteristic. However, under RCRA, it is  
 the responsibility of the product user to  
 determine at the time of disposal, whether a  
 material containing the product or derived from  
 the product should be classified as a hazardous  
 waste. (40 CFR 261.20-24)

The following chemicals are specifically listed by individual states; other  
 product specific health and safety data in other sections of the MSDS may also  
 be applicable for state requirements. For details on your regulatory  
 requirements you should contact the appropriate agency in your state.

| COMPONENT NAME<br>/CAS NUMBER     | CONCENTRATION | STATE CODE        |
|-----------------------------------|---------------|-------------------|
| Ammonium Thiosulfate<br>7783-18-8 | 50-55 %       | PA1, PA4, MA, NJ1 |
| Water<br>7732-18-5                | 35-40 %       | PA3, NJ4          |
| Sodium Sulfite<br>7757-83-7       | 1-5 %         | PA3, NJ4          |
| Boric Acid<br>10043-35-3          | 1-5 %         | PA3, NJ4          |

- MA = Massachusetts Hazardous Substance List
- NJ1 = New Jersey Hazardous Substance List
- NJ4 = New Jersey Other - included in 5 predominant ingredients > 1%
- PA1 = Pennsylvania Hazardous Substance List
- PA3 = Pennsylvania Non-hazardous present at 3% or greater.
- PA4 = Pennsylvania Environmental Hazardous Substance List.

16. OTHER INFORMATION:

HMIS RATINGS:           Health   Flammability   Reactivity   Personal Prot  
                          1           0           0           B  
                          0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe  
                          B=Safety Glasses, Gloves

Agfa's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS ratings are provided by Agfa as a customer service.

REASON FOR ISSUE.....: Reviewed, Harmonized  
PREPARED BY.....: R. Ruppel-Kerr  
APPROVED BY.....: M. Patrick  
APPROVAL DATE.....: 06/12/2002  
SUPERSEDES DATE.....: 03/23/1998  
MSDS NUMBER.....: 20764

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