

G335, PART A

SUBID:00000008579

Version 1
Revision Date 08-14-2007

Print Date 08-15-2007

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Identification of the substance/preparation

Product name : G335, PART A
 MSDS Number : 000000008579
 Use of the Substance/Preparation : Photographic fixing concentrate
 Product code : LXW6T, LXW7V, LXW8X
 Business group : IN

Company/Undertaking Identification

Agfa Corporation
 100 Challenger Road
 Ridgefield Park, NJ 07660
 U.S.A.

Transport Emergency

Non-transportation

Call CHEMTREC : +1 800 4249300
 International : +1 703 5273887

Health Emergency Phone : +1 303 6235716
 Agfa Information Phone : +1 201 4402500

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Aqueous photographic fixing concentrate, mainly consisting of:

	<u>CAS-No.</u>	<u>Concentration [%]</u>	
• Ammonium thiosulphate	7783-18-8	>= 40.0	<= 60.0
• Sodium sulphite	7757-83-7	>= 1.0	<= 5.0
• Acetic acid	64-19-7	>= 1.0	<= 5.0
• Boric acid	10043-35-3	>= 1.0	<= 5.0
• Water	7732-18-5	>= 30.0	<= 40.0
• Sodium acetate	127-09-3	>= 1.0	<= 5.0

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview

Form : Liquid.
 Colour : Colourless.
 Odour : Slightly pungent smell

WARNING !

Irritating gases/fumes may be given off during burning or thermal decomposition.
 May cause respiratory tract irritation. May cause allergic respiratory reaction. May cause skin irritation. May cause allergic skin reaction. May cause eye irritation.

Potential Health Effects

Primary Routes of Entry : Eye contact. Skin contact. Inhalation of vapours or mists.
 Accidental ingestion.

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Acute health effects**Inhalation**

- Ammonium thiosulphate : Is expected to be irritating to the respiratory tract with symptoms of coughing, sore throat, and runny nose.
- Sodium sulphite : Is expected to be irritating to the respiratory tract with symptoms of coughing, sore throat, and runny nose. 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.
- Acetic acid : Is expected to be irritating to the respiratory tract with symptoms of coughing, sore throat, and runny nose.
- Boric acid : Is expected to be irritating to the respiratory tract with symptoms of coughing, sore throat, and runny nose.

Skin contact

- Ammonium thiosulphate : May be irritating to the skin with symptoms of reddening and itching.
- Sodium sulphite : May be irritating to the skin with symptoms of reddening and itching. May cause skin sensitization with symptoms of rash, itching, hives, and swelling.
- Acetic acid : Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage. Skin sensitization is rare, but has been reported.
- Boric acid : May be irritating to the skin with symptoms of reddening and itching.

Eye contact

- Ammonium thiosulphate : May be irritating to the eyes with symptoms of reddening, tearing and stinging.
- Sodium sulphite : May be irritating to the eyes with symptoms of reddening, tearing and stinging.
- Acetic acid : Overexposure can cause severe irritation resulting in burning, stinging, reddening, tearing, swelling and possible injury to the cornea depending on the concentration.
- Boric acid : May be irritating to the eyes with symptoms of reddening, tearing and stinging.

Ingestion

- Ammonium thiosulphate : May cause gastrointestinal irritation.
- Sodium sulphite : May cause gastrointestinal irritation.
- Acetic acid : Swallowing high concentrations may cause severe injury.
- Boric acid : May cause damage to the gastrointestinal tract with pain, nausea, vomiting, diarrhea, headache, confusion and drowsiness. Ingestion causes damage of central nervous system, liver, kidneys, blood and bone marrow.

Chronic health hazards**Inhalation**

- Sodium sulphite : Repeated or prolonged exposure may cause an allergic respiratory reaction in previously exposed individuals.
- Boric acid : Repeated or prolonged inhalation may cause pain, nausea, vomiting, diarrhea, headache, confusion and drowsiness.

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Skin contact

- Sodium sulphite : Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
- Boric acid : Chronic intensive skin contact may cause dermatitis.

Ingestion

- 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.

Carcinogenicity

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

SECTION 4. FIRST AID MEASURES

- Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact : Wash immediately with plenty of water and soap. If symptoms persist, seek medical advice.
- Ingestion : Rinse mouth with plenty of water. Seek medical advice.
- Inhalation : Take person to fresh air. If necessary, seek medical advice.

SECTION 5. FIRE-FIGHTING MEASURES

- Specific hazards during fire fighting : In case of fire, thermal decomposition with emission of hazardous fumes is possible (e.g. sulphur dioxide and ammonia).
- Special protective equipment for fire-fighters : Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
- Additional advice : Product is not combustible.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : See section : Exposure controls / personel protection.
- Environmental precautions : For waste disposal see section 13.
- Methods for cleaning up : Dike the spill if necessary. Soak up with absorbent material. Collect large spills into a properly labelled and sealable container. Prevent release into the drain, soil or surface water.
- Additional advice : Wash away residues with plenty of water.

SECTION 7. HANDLING AND STORAGE
Handling

- Advice on protection against fire and explosion : No special protective measures against fire and explosion required.

Storage

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- Advice on common storage : Store away from strong acids, strong alkalis and strong oxidizing agents.
- Requirements for storage areas and containers : Keep container tightly closed. Protect from direct sunlight.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Limit Values (US)**

Components	CAS-No.	Values	Type	Revision Date	Basis
Acetic acid	64-19-7	10 ppm	TWA	2002	ACGIH
		15 ppm	STEL	2002	ACGIH
		25 mg/m ³	PEL	06 1993	OSHA Z1
		25 mg/m ³	TWA	1989	OSHA Z1A

Exposure controls

- Hygiene measures : Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.
- Respiratory protection : Appropriate respiratory protection and/or exhaust locally. Under normal conditions of use, respirator protection is not required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard Z94.4-02.
- Hand protection : Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butyl rubber (thickness \geq 0.36 mm, breakthrough time > 480 min), nitrile rubber (thickness \geq 0.38 mm, breakthrough time > 480 min) or neoprene (thickness \geq 0.65 mm, breakthrough time > 240 min). For intermittent splash protection corresponding gloves with breakthrough times > 60 min can be used. Avoid gloves made of: natural latex.
- Eye protection : Safety glasses.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid.
- Colour : Colourless.
- Odour : Slightly pungent smell
- Vapour pressure : 23.0 hPa at 20 °C (68 °F)
- Relative density : 1.343 at 20 °C (68 °F)
- pH (25 °C, 77 °F) : 5.4
- Melting point/range : < 0 °C (< 32 °F)
- Boiling point/range : > 100 °C (> 212 °F)
- VOC content : 3.0 %
VOC content excluding water

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SECTION 10. STABILITY AND REACTIVITY

- Stability : The product is stable under normal conditions of storage and use.
- Hazardous decomposition products : Hazardous decomposition products Sulphur dioxide and ammonia
- Conditions to avoid : Avoid contact with strong acids, strong alkalis and strong oxidizing agents. Remove all chemicals and rinse the processing tanks thoroughly with water before using any cleansing products.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity data specific for individual ingredients in their pure state:

Acute oral toxicity

- Ammonium thiosulphate : LD50 rat 2,890 mg/kg
- Sodium sulphite : LD50 rat 3,560 mg/kg
- Acetic acid : LD50 rat 3,310 mg/kg
- Boric acid : LD50 rat 2,660 mg/kg

Acute inhalation toxicity

- Acetic acid : LC50 rat 11.4 mg/l/ 4 h

Acute dermal toxicity

- Acetic acid : LD50 rabbit 1,060 mg/kg
- Boric acid : LD50 rat > 2,000 mg/kg

Other information

In normal conditions of use, sulphur dioxide may be set free in concentrations well below the threshold limit value (TLV) of 2 ppm. Asthmatic individuals, however, may possibly be sensitive to concentrations as low as 0.1 ppm.

SECTION 12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)****Biodegradation**

- Acetic acid : OECD 301D Assessment of biological degradability 99 % after 30 d

Ecotoxicity effects

Ecotoxicity data specific for individual ingredients in their pure state:

Toxicity to fish

- Ammonium thiosulphate : Species: Poecilia reticulata (guppy)
LC50: > 200 mg/l/ 48 h
- Sodium sulphite : Species: Leuciscus idus (golden orfe)
LC50: > 220 mg/l/ 96 h

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- Acetic acid : Species: Pimephales promelas (fathead minnow)
LC50: 88 mg/l/ 96 h
- Boric acid : Species: Carassius auratus (goldfish)
LC50: 178 mg/l/ 72 h

Toxicity to daphnia

- Sodium sulphite : Species: Daphnia magna (water flea)
EC50: 273 mg/l/ 48 h
- Acetic acid : Species: Daphnia magna (water flea)
EC50: 47 mg/l/ 24 h
- Boric acid : Species: Daphnia magna (water flea)
EC50: 133 mg/l/ 48 h

Toxicity to algae

- Acetic acid : Species: Scenedesmus quadricauda (algae)
EC10: 4,000 mg/l/ 8 d

Toxicity to bacteria

- Sodium sulphite : Species: Pseudomonas putida (bacteria)
EC50: 770 mg/l/ 17 h
- Acetic acid : Species: Pseudomonas putida (bacteria)
EC10: 2,850 mg/l/ 16 h
- Boric acid : Species: Pseudomonas putida (bacteria)
EC50: > 1,000 mg/l/ 3 h

Further information on ecology

- Biochemical oxygen demand : 94,100 mg/l
within 5 days (BOD5)
- Chemical Oxygen Demand : 351,000 mg/l
(COD)

SECTION 13. DISPOSAL CONSIDERATIONS**Waste disposal methods**

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Discharge to sewer may require approval of permitting authority and may require pretreatment.

US. RCRA Hazardous Waste Classification (40 CFR 261)

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.

SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION**US. Toxic Substances Control Act (TSCA)**

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All of the components of this product are listed on the TSCA Inventory.

US. OSHA Classification

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

US. SARA 311/312 Hazard Categories

Immediate Health Hazard. Delayed Health Hazard.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- Ammonium thiosulphate : De minimis concentration: 1.0 %

US. EPA CERCLA Hazardous Substances (40 CFR 302)

- Acetic acid : Reportable quantity: 5,000 lbs

US. California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

State Right-to-Know Information

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.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

	<u>CAS-No.</u>	<u>Concentration [%]</u>	
• Ammonium thiosulphate	7783-18-8	>= 40.0	- <= 60.0
• Acetic acid	64-19-7	>= 1.0	- <= 5.0

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

	<u>CAS-No.</u>	<u>Concentration [%]</u>	
• Ammonium thiosulphate	7783-18-8	>= 40.0	- <= 60.0

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

	<u>CAS-No.</u>	<u>Concentration [%]</u>	
• Ammonium thiosulphate	7783-18-8	>= 40.0	- <= 60.0
• Acetic acid	64-19-7	>= 1.0	- <= 5.0

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

	<u>CAS-No.</u>	<u>Concentration [%]</u>	
• Acetic acid	64-19-7	>= 1.0	- <= 5.0

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists : See Section 2.

Canadian WHMIS Classification

D2A : Very Toxic Material Causing Other Toxic Effects

Canadian Environmental Protection Act (CEPA)

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All components of this product are on the Canadian DSL list.

SECTION 16. OTHER INFORMATION**US. HMIS Rating**

Health	:	1
Flammability	:	0
Reactivity	:	0

(0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe)

US. NFPA 704M Rating

Health	:	1
Flammability	:	0
Reactivity	:	0

(0 = Insignificant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme)

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

This MSDS is replacing Agfa MSDS number 079TA.004

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