

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - General Information

<b>Product Name: MF II Automatic X-Ray Fixers Concentrate, Working Strength</b>		<b>Catalog #:</b>	
Product Use: Photographic developer	HMIS SCALE Health 1	Flamability 0	44-640      42-798-300
Supplier: Shimadzu Medical Systems Oceanic	Reactivity 0	PPE C	
Address: Unit E, 10-16 South Street Rydalmere, NSW 2116			
Phone No.: 02-9898-2444		Emergency Tel.: 1800-812-774 or 0419-468-514	

## SECTION 2 - Product & Hazardous Ingredients Information

HAZARDOUS INGREDIENTS	CAS No.	W?W %	PEL	LD50	LC50
Water	7732-18-5	90-95	not listed	42.6 gm/kg	not available
Ammonium Thiosulfate	7783-18-8	12-Aug	not listed	2890 mg/kg	not available
Sodium Sulfite	7757-83-7	<2	not listed	2825 mg/kg	not available
Aluminum sulfate	10043-01-3	<2	ACGIH TWA 2mg/m3	6201 mg/kg	not available

## SECTION 3 - Hazards Identification

### EFFECTS OF ACUTE EXPOSURE TO PRODUCT

Harmful if swallowed. May cause burning or irritation of eyes and mucous membranes.  
 May cause mild skin irritation and or allergic reaction.  
 Prolonged inhalation of vapors may be irritating and cause headaches

### EFFECTS OF CHRONIC EXPOSURE TO PRODUCT

None known

## SECTION 4 - First Aid Measures

### SKIN CONTACT:

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

### EYE CONTACT:

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

### INGESTION:

DO NOT induce vomiting. Seek medical attention immediately.

### INHALATION:

If inhaled, remove to fresh air.

## SECTION 5 - Fire Fighting Measures

Flammability    YES     NO     IF YES UNDER WHAT CONDITIONS

### MEANS OF EXTINGUISHING

As needed to extinguish adjacent fire source.

<u>FLASH POINT (C/F)</u>	<u>Upper limit % by volume</u>	<u>Lower limit % by volume</u>	<u>Auto ignition Temperature (C/F)</u>
Not appropriate	Not appropriate	Not appropriate	Not appropriate

<u>HAZARDOUS COMBUSTION PRODUCTS</u>	<u>Explosion Data</u>	<u>Sensitivity to impact</u>	<u>Sensitivity to Static Discharge</u>
"See Hazardous Decomposition Products"	not susceptible	not susceptible	not susceptible

## SECTION 6 - Accidental Release

Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

## SECTION 7 - Handling and Storage

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes.  
 Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

PAGE 2.

<b>Product Name: MF II Automatic X-Ray Fixers Concentrate, Working Strength</b>	<b>Catalog #:</b>
<b>SECTION 8 - Exposure Control</b>	44-640 42-798-300

VENTILLATION Good general ventilation

SKIN Latex or Nitril

RESPIRATORY Not normally required

OTHER Eye wash station

EYE: Splash goggles

**SECTION 9 - Physical & Chemical Properties**

<u>PHYSICAL STATE</u> Liquid	<u>ODOR &amp; APPEARANCE</u> Clear, colorless with slight vinegar odor.		<u>ODOR THRESHOLD</u> Not available
<u>VAPOUR PRESSURE (mm-Hg)</u> <17 mm Hg	<u>Vapor Density (Air=1)</u> 0.6 mm Hg	<u>Evaporation Rate (Water=1)</u> Not Available	<u>Boiling Point</u> > 212 F
<u>pH</u> 4.3	<u>Specific Gravity</u> 1.085	<u>Solubility in Water</u> Complete	<u>Freeze Point</u> < 32 F
		<u>Coef H2O/oil</u> N/A	<u>% Volatile (by volume)</u> 50%

**SECTION 10 - Stability & Reactivity Data**

<u>Chemical Stability</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	IF NO, UNDER WHAT CONDITIONS
<u>INCOMPATIBLE WITH OTHER SUBSTANCES</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	IF YES, WHICH ONES? Strong reducing agents & Strong bases.
<u>HAZARDOUS DECOMPOSITION PRODUCTS:</u>	Sulfur dioxide & ammonia
<u>REACTIVITY:</u>	Stable under ambient pressure & temperature.

**SECTION 11 - Toxicological Information**

<u>EXPOSURE LIMITS</u> None Known	<u>Irritancy of Product</u> Skin: Irritant	<u>Sensitation to Product</u> None known	<u>CARCINOGENICITY</u> Not listed by IARC, OSHA, or ACGIH
<u>TERATOGENICITY</u> None Known	<u>REPRODUCTIVE TOXIN</u> Not Known	<u>MUTAGENICITY</u> Not Known	<u>SYNERGISTIC PRODUCTS</u> Not Known

**SECTION 12 - Ecological Information**

No Data Available

**SECTION 13 - Disposal Considerations**

Dispose of this product in accordance with federal, state and/or local laws.

**SECTION 14 - Transportation Information**

Not regulated for transportation.

**SECTION 15 - Regulatory Information**

SARA: Reportable quantity (RQ) for Ammonium Thiosulfate 5000 lb.  
SARA Section 304, CERCLA Hazardous components - Ammonium Thiosulfate  
SARA Section 302,304,313 Hazardous components (None)  
Not a controlled product under Canadian WHMIS regulation

**SECTION 16 - Other Information**

The information contained in this MSDS is furnished without warranty of any kind. The user should consider this data a supplement to other data gathered and must make an independent determination of suitability from this and other sources to assure proper use and disposal of this material and the health and safety of employees and customers.

DATE: 1-Mar-13

Page 2 of 2

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - General Information

<b>Product Name: MF II Automatic X-Ray Fixers Concentrate, Part A</b>			<b>Catalog #:</b>	
Product Use: Photographic developer	HMIS SCALE Health 1	Flamability 0	44-640	42-798-300
Supplier: Shimadzu Medical Systems Oceania	Reactivity 0	PPE C		
Address: Unit E, 10-16 South Street Rydalmere, NSW 2116				
Phone No.: 02-9898-2444		Emergency Tel.: 1800-812-774 or 0419-468-514		

## SECTION 2 - Product & Hazardous Ingredients Information

HAZARDOUS INGREDIENTS	CAS No.	W?W %	PEL	LD50	LC50
Water	7732-18-5	40-50	not listed	42.6 gm/kg	not available
Ammonium Thiosulfate	7783-18-8	40-50	not listed	2890 mg/kg	not available
Sodium Sulfite	7757-83-7	5 - 10	not listed	2825 mg/kg	not available
Acetic Acid	64-19-7	5 - 10	OSHA TWA 10 ppm	3310 mg/kg	5610-1h

## SECTION 3 - Hazards Identification

### EFFECTS OF ACUTE EXPOSURE TO PRODUCT

Harmful if swallowed. May cause burning or irritation of eyes and mucous membranes.  
 May cause mild skin irritation and or allergic reaction.  
 Prolonged inhalation of vapors may be irritating and cause headaches

### EFFECTS OF CHRONIC EXPOSURE TO PRODUCT

None known

## SECTION 4 - First Aid Measures

### SKIN CONTACT:

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

### EYE CONTACT:

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

### INGESTION:

DO NOT induce vomiting. Seek medical attention immediately.

### INHALATION:

If inhaled, remove to fresh air.

## SECTION 5 - Fire Fighting Measures

Flammability YES  NO  IF YES UNDER WHAT CONDITIONS

### MEANS OF EXTINGUISHING

As needed to extinguish adjacent fire source.

FLASH POINT (C/F) Upper limit % by volume Lower limit % by volume Auto ignition Temperature (C/F)

Not appropriate Not appropriate Not appropriate Not appropriate

HAZARDOUS COMBUSTION PRODUCTS Explosion Data Sensitivity to impact Sensitivity to Static Discharge

"See Hazardous Decomposition Products" not susceptible not susceptible

## SECTION 6 - Accidental Release

Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

## SECTION 7 - Handling and Storage

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes.  
 Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

PAGE 2.

<b>Product Name: MF II Automatic X-Ray Fixers Concentrate, Part A</b>	<b>Catalog #:</b>
<b>SECTION 8 - Exposure Control</b>	44-640 42-798-300

VENTILLATION Good general ventilation

SKIN Latex or Nitril

RESPIRATORY Not normally required

OTHER Eye wash station

EYE: Splash goggles

**SECTION 9 - Physical & Chemical Properties**

<u>PHYSICAL STATE</u> Liquid	<u>ODOR &amp; APPEARANCE</u> Clear solution, colorless with slight vinegar odor.		<u>ODOR THRESHOLD</u> Not available
<u>VAPOUR PRESSURE (mm-Hg)</u> <17 mm Hg	<u>Vapor Density (Air=1)</u> 0.6 mm Hg	<u>Evaporation Rate (Water=1)</u> Not Available	<u>Boiling Point</u> > 212 F
<u>pH</u> 5.2	<u>Specific Gravity</u> 1.32	<u>Solubility in Water</u> Complete	<u>Freeze Point</u> < 32 F
		<u>Coef H2O/oil</u> N/A	<u>% Volatile (by volume)</u> 50%

**SECTION 10 - Stability & Reactivity Data**

Chemical Stability IF NO, UNDER WHAT CONDITIONS

YES X NO

INCOMPATIBLE WITH OTHER SUBSTANCES IF YES, WHICH ONES?

YES X NO Strong reducing agents & Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur dioxide & ammonia

REACTIVITY: Stable under ambient pressure & temperature.

**SECTION 11 - Toxicological Information**

<u>EXPOSURE LIMITS</u> Acetic acid 10 ppm	<u>Irritancy of Product</u> Skin: Irritant	<u>Sensation to Product</u> None known	<u>CARCINOGENICITY</u> Not listed by IARC, OSHA, or ACGIH
<u>TERATOGENICITY</u> None Known	<u>REPRODUCTIVE TOXIN</u> Not Known	<u>MUTAGENICITY</u> Not Known	<u>SYNERGISTIC PRODUCTS</u> Not Known

**SECTION 12 - Ecological Information**

No Data Available

**SECTION 13 - Disposal Considerations**

Dispose of this product in accordance with federal, state and/or local laws.

**SECTION 14 - Transportation Information**

Not regulated for transportation.

**SECTION 15 - Regulatory Information**

SARA: Reportable quantity (RQ) for Ammonium Thiosulfate 5000 lb, Acetic acid 500 lb.

SARA Section 304, CERCLA Hazardous components - Ammonium Thiosulfate

SARA Section 302,304,313 Hazardous components (None)

Not a controlled product under Canadian WHMIS regulation

**SECTION 16 - Other Information**

The information contained in this MSDS is furnished without warranty of any kind. The user should consider this data a supplement to other data gathered and must make an independent determination of suitability from this and other sources to assure proper use and disposal of this material and the health and safety of employees and customers.

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - General Information

<b>Product Name: MF II Automatic X-Ray Fixers Concentrate, Part B</b>			<b>Catalog #:</b>	
Product Use: Photographic developer	HMIS SCALE Health 1	Flamability 0	44-640	42-798-300
Supplier: Shimadzu Medical Systems Oceania	Reactivity 0	PPE C		
Address: Unit E, 10-16 South Street Rydalmere, NSW 2116				
Phone No.: 02-9898-2444		Emergency Tel.: 1800-812-774 or 0419-468-514		

## SECTION 2 - Product & Hazardous Ingredients Information

HAZARDOUS INGREDIENTS	CAS No.	W?W %	PEL	LD50	LC50
Water	7732-18-5	70-80	not listed	42.6 gm/kg	not available
Aluminum sulfate	10043-01-3	20-30		6201mg/kg	not available

## SECTION 3 - Hazards Identification

### EFFECTS OF ACUTE EXPOSURE TO PRODUCT

Harmful if swallowed. May cause burning or irritation of eyes and mucous membranes. May cause mild skin irritation and or  
May cause mild skin irritation and or allergic reaction.  
Prolonged inhalation of vapors may be irritating and cause headaches

### EFFECTS OF CHRONIC EXPOSURE TO PRODUCT

None known

## SECTION 4 - First Aid Measures

### SKIN CONTACT:

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

### EYE CONTACT:

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

### INGESTION:

DO NOT induce vomiting. Seek medical attention immediately.

### INHALATION:

If inhaled, remove to fresh air.

## SECTION 5 - Fire Fighting Measures

Flamability YES  NO  IF YES UNDER WHAT CONDITIONS

### MEANS OF EXTINGUISHING

As needed to extinguish adjacent fire source.

### FLASH POINT (C/F)

Upper limit % by volume

Lower limit % by volume

Autoignition Temperature (C/F)

Not appropriate

Not appropriate

Not appropriate

Not appropriate

### HAZARDOUS COMBUSTION PRODUCTS

Explosion Data Sensitivity to impact

Sensitivity to Static Discharge

"See Hazardous Decomposition Products"

not susceptible

not susceptible

## SECTION 6 - Accidental Release

Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

## SECTION 7 - Handling and Storage

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes.  
Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

