

# ILFORD PHOTO

## HARMAN technology Ltd

### MATERIAL SAFETY DATA SHEET

#### HARMAN Toner Selenium

#### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<b>PRODUCT NAME</b>	HARMAN Toner Selenium
<b>PRODUCT NO.</b>	1143207
<b>INTERNAL ID</b>	10303
<b>PRODUCT USE</b>	Toning solution for monochrome prints
<b>SUPPLIER</b>	Distributors USA: WYNIT Inc, 5801 East Taft Road, North Syracuse, NY 13212. Tel: 1 800 GO WYNIT (469 9648) or 1 315 437 4167, Fax: 1 315 437 0432 Canada: Amplis Foto Inc, 22 Telson Road, Markham, Ontario L3R 1E5, Tel: 905 477 4111, Fax: 905 477 2502
<b>CONTACT PERSON</b>	USA: ilfordhelp@wynit.com; Canada: terry.bevens@amplis.com
<b>EMERGENCY TELEPHONE</b>	USA/Canada: For medical emergency, call 1 800 842 9660 (Product Misuse); For transportation emergency call CHEMTREC 1 800 424 9300
<b>CONTAINER SIZE</b>	1 Liter
<b>CONTAINER SIZE</b>	

#### 2 HAZARDS IDENTIFICATION

##### POTENTIAL HEALTH EFFECTS

##### INHALATION

May cause irritation to the respiratory system.

##### INGESTION

Toxic if swallowed.

##### SKIN CONTACT

Harmful in contact with skin. May cause skin irritation/eczema. May cause sensitization by skin contact.

##### EYE CONTACT

Ammonia Irritating to eyes. May cause severe irritation to eyes.

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
Ammonium Thiosulphate	231-982-0	7783-18-8	10-30%
SODIUM SELENITE	233-267-9	10102-18-8	1-5%
Water	231-791-2	7732-18-5	50-70%

#### 4 FIRST-AID MEASURES

##### INHALATION

Move the exposed person to fresh air at once. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

##### INGESTION

Remove victim immediately from source of exposure. Rinse mouth thoroughly. Provide rest, warmth and fresh air. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention.

## HARMAN Toner Selenium

### SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Contact physician if irritation continues.

### EYE CONTACT

Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

---

## 5 FIRE-FIGHTING MEASURES

### EXTINGUISHING MEDIA

The product is non-combustible. Use extinguishing media appropriate for surrounding fire.

### SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapors.

### UNUSUAL FIRE & EXPLOSION HAZARDS

No unusual fire or explosion hazards noted.

### SPECIFIC HAZARDS

The product is non-combustible. If heated, harmful vapors may be formed.

### PROTECTIVE MEASURES IN FIRE

Use protective equipment appropriate for surrounding materials. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

---

## 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Avoid contact with skin and eyes. Provide adequate ventilation. For personal protection, see section 8.

### ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains, water courses or onto the ground. The product should not be dumped in nature but collected and delivered according to agreement with the local authorities.

### SPILL CLEAN UP METHODS

For waste disposal, see section 13. Wear necessary protective equipment. Small quantities may be flushed to drains with plenty of water. Absorb in vermiculite, dry sand or earth and place into containers. Wash contaminated area with water. Prevent discharge of larger quantity to drain.

---

## 7 HANDLING AND STORAGE

### HANDLING

Provide good ventilation. Avoid spilling, skin and eye contact. Do not eat, drink or smoke when using the product. Read and follow manufacturer's recommendations.

### STORAGE

Store in closed original container in a dry place. Store above freezing. Store under well-ventilated conditions at a temperature below 25°C.

### STORAGE CLASS

Chemical storage.

---

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### PROCESS CONDITIONS

Provide eyewash station and it is recommended that a safety shower is also available.

### PROTECTIVE EQUIPMENT



### ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation. Must not be handled in confined space without sufficient ventilation.

### RESPIRATORY EQUIPMENT

Respiratory protection not required.

## HARMAN Toner Selenium

### 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

Use approved safety goggles or face shield.

### OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b>	Clear liquid		
<b>COLOR</b>	Colorless		
<b>ODOR</b>	Ammonia		
<b>SOLUBILITY</b>	100% Soluble in water.		
<b>BOILING POINT (°C)</b>	$>$ 100 760 mm Hg	<b>RELATIVE DENSITY</b>	1.29 20
<b>pH-VALUE, CONC. SOLUTION</b>	8.8		

## 10 STABILITY AND REACTIVITY

### STABILITY

Stable under the prescribed storage conditions. No particular stability concerns.

### CONDITIONS TO AVOID

Avoid contact with acids and alkalis. Avoid mixing with: Strong alkalis. Generates toxic gas in contact with acid.

### HAZARDOUS POLYMERISATION

Will not polymerise.

### MATERIALS TO AVOID

Strong acids. Strong alkalis. Avoid contact with other photographic solutions and/or cleaning compounds.

### HAZARDOUS DECOMPOSITION PRODUCTS

When heated, toxic and corrosive vapours/gases may be formed. Ammonia Sulphurous gases (SO<sub>x</sub>). Selenium

## 11 TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION

This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

<b>Name</b>	SODIUM SELENITE
<b>Toxic Dose 1 - LD 50</b>	7 mg/kg (oral rat)
<b>Name</b>	Ammonium Thiosulphate
<b>Toxic Dose 1 - LD 50</b>	2890 mg/kg (oral rat)
<b>Name</b>	Sodium Sulphite
<b>Toxic Dose 1 - LD 50</b>	2610 mg/kg (oral rat)

## 12 ECOLOGICAL INFORMATION

### ECOTOXICITY

The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

<b>Name</b>	SODIUM SELENITE
<b>LC 50, 96 hrs, Fish mg/l</b>	$<$ 10

## 13 DISPOSAL CONSIDERATIONS

### WASTE MANAGEMENT

The disposal process for this product when it becomes waste, depends largely upon how much (volume) waste is generated, where the waste is generated (location) and by whom (whether in a professional or amateur or other capacity). Therefore only outline guidance can be provided. For detailed guidance and advice on the disposal of this product when it becomes waste, please visit the COPPICE web site at <http://www.pic.uk.net/coppice/index.htm>. The information is relevant to both professional and amateur users.

## HARMAN Toner Selenium

### DISPOSAL METHODS

Used, diluted, and spent solutions may be allowed to be discharged to sanitary sewer by permit IF allowed by local regulations. Consult your local authority for advice. Waste may have to be pre-treated before discharge. Consult local authorities before discharging any waste to sewer. Do not discharge to septic system. Waste that cannot be discharged to sewer may have to be handled by a licensed hazardous waste contractor.

---

### 14 TRANSPORT INFORMATION

#### TRANSPORT NOTES

This product is not classified as dangerous for transport by road, rail sea or air, (ADR/RID, IMDG, IATA). The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

---

### 15 REGULATORY INFORMATION

#### REGULATORY STATUS (US)

TSCA: The ingredients of this product are on the TSCA Inventory. This Product is Hazardous under the OSHA Hazard Communication Standard.

#### REGULATORY REFERENCES

29 CFR 1910.1010 Federal Regulations (OSHA Standard).

### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

#### LABEL(S) FOR SUPPLY



Materials Causing  
Immediate and  
Serious Toxic  
Effect.

#### CONTROLLED PRODUCT CLASSIFICATION

Canadian WHMIS Classification D1B

---

### 16 OTHER INFORMATION

#### GENERAL INFORMATION

HARMAN technology Ltd believe the information and recommendations contained herein are based on correct and factual data. However, no express or implied guarantee or warranty of any kind is made with respect to this information. Use this information only to supplement other information you have gathered and then make an independent determination about the completeness and suitability of all information to ensure the proper use and disposal of this product and the health and safety of employees and customers.

#### INFORMATION SOURCES

European Photographic Chemical Industry Code of Practice For Classification And Labelling

#### ISSUED BY

HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email: trevor.rhodes@harmantechology.com

#### REVISION DATE

11/26/2010

#### VERSION No.

4

# SAFETY DATA SHEET

## HARMAN Selenium Toner 1+3

### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**PRODUCT NAME** HARMAN Selenium Toner 1+3  
**APPLICATION** Print toning solution  
**CONTACT PERSON** HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email: trevor.rhodes@harmantechnology.com

### 2 HAZARDS IDENTIFICATION

Harmful if swallowed. Contact with acids liberates toxic gas.

**CLASSIFICATION (1999/45)** Xn;R22. R31.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification (67/548)
SODIUM SELENITE	233-267-9	10102-18-8	< 1	T+;R28 T;R23 R43 R31 N;R51/53

The Full Text for all R-Phrases are Displayed in Section 16

### 4 FIRST-AID MEASURES

**INHALATION**

Remove victim immediately from source of exposure.

**INGESTION**

Immediately rinse mouth and provide fresh air. Get medical attention if any discomfort continues.

**SKIN CONTACT**

Remove contaminated clothes and rinse skin thoroughly with water.

**EYE CONTACT**

No recommendation given, but first aid may still be required in case of accidental exposure of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

### 5 FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA**

The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

**SPECIAL FIRE FIGHTING PROCEDURES**

Avoid breathing fire vapours.

**UNUSUAL FIRE & EXPLOSION HAZARDS**

No unusual fire or explosion hazards noted.

**SPECIFIC HAZARDS**

In case of fire, toxic gases may be formed.

### 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS**

Follow precautions for safe handling described in this safety data sheet.

**ENVIRONMENTAL PRECAUTIONS**

Not relevant considering the small amounts used.

**SPILL CLEAN UP METHODS**

Flush away small spillages with plenty of water.

### 7 HANDLING AND STORAGE

**USAGE PRECAUTIONS**

Provide good ventilation.

## HARMAN Selenium Toner 1+3

**STORAGE PRECAUTIONS**

No specific recommendations.

**STORAGE CLASS**

Chemical storage.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	TWA - 8 hrs		STEL - 15 min		Notes
SODIUM SELENITE	WEL		0.1 mg/m3			

WEL = Workplace Exposure Limit.

**PROTECTIVE EQUIPMENT**



**PROCESS CONDITIONS**

Provide eyewash station.

**ENGINEERING MEASURES**

Provide adequate ventilation.

**HAND PROTECTION**

Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butyl rubber (thickness >= 0.36 mm, breakthrough time > 480 min), nitrile rubber (thickness >= 0.38 mm, breakthrough time > 480 min) or neoprene (thickness >= 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. The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374.

**EYE PROTECTION**

If risk of splashing, wear safety goggles or face shield.

**HYGIENE MEASURES**

Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

### 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b>	Clear liquid		
<b>COLOUR</b>	Colourless		
<b>ODOUR</b>	Slightly pungent odour		
<b>SOLUBILITY</b>	Soluble in water.		
<b>BOILING POINT (°C)</b>	100	<b>pH-VALUE, DILUTED SOLUTION</b>	8.7

### 10 STABILITY AND REACTIVITY

**STABILITY**

Stable under normal temperature conditions and recommended use.

**CONDITIONS TO AVOID**

Avoid contact with acids and alkalis.

**HAZARDOUS POLYMERISATION**

Will not polymerise.

**MATERIALS TO AVOID**

Strong acids. Strong alkalis.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Fire creates: Vapours/gases/fumes of: Selenium

### 11 TOXICOLOGICAL INFORMATION

## HARMAN Selenium Toner 1+3

### TOXICOLOGICAL INFORMATION

This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

#### INHALATION

No specific health warnings noted.

#### INGESTION

Harmful if swallowed.

#### SKIN CONTACT

No specific health warnings noted.

#### EYE CONTACT

No specific health warnings noted.

#### HEALTH WARNINGS

No specific health warnings noted.

<b>Name</b>	SODIUM SELENITE
<b>Toxic Dose 1 - LD 50</b>	7 mg/kg (oral rat)

### 12 ECOLOGICAL INFORMATION

#### ECOTOXICITY

Not regarded as dangerous for the environment.

### 13 DISPOSAL CONSIDERATIONS

#### GENERAL INFORMATION

Dispose of in accordance with local regulations

#### DISPOSAL METHODS

Used, diluted, and spent solutions may be allowed to be discharged to sanitary sewer by permit IF allowed by local regulations. Consult your local authority for advice. Waste may have to be pre-treated before discharge. Consult local authorities before discharging any waste to sewer. Do not discharge to septic system. Waste that cannot be discharged to sewer may have to be handled by a licensed hazardous waste contractor.

### 14 TRANSPORT INFORMATION

#### GENERAL

This product is not classified as dangerous for transport by road, rail sea or air, (ADR/RID, IMDG, IATA).

### 15 REGULATORY INFORMATION

#### LABELLING



Harmful

#### CONTAINS

SODIUM SELENITE

#### RISK PHRASES

R22	Harmful if swallowed.
R31	Contact with acids liberates toxic gas.

#### SAFETY PHRASES

S46	If swallowed, seek medical advice immediately and show this container or label.
P14	Contains SODIUM SELENITE. May produce an allergic reaction.

### 16 OTHER INFORMATION

#### INFORMATION SOURCES

Material Safety Data Sheet, Misc. manufacturers.

#### ISSUED BY

HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email: trevor.rhodes@harmantechnology.com

REVISION DATE: 29/09/2010

## HARMAN Selenium Toner 1+3

REVISION DATE 29/09/2010

REV. NO./REPL. SDS 2  
GENERATED

### RISK PHRASES IN FULL

R31	Contact with acids liberates toxic gas.
R43	May cause sensitisation by skin contact.
R23	Toxic by inhalation.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R28	Very toxic if swallowed.