

# ILFORD PHOTO

## HARMAN technology Ltd

### SAFETY DATA SHEET

#### Microphen Developer (Part A)

---

#### 1. IDENTIFICATION

---

**Product Name** Microphen Developer (Part A)  
**Product No.** 1173875  
**Internal Id** 10125  
**Container Size** 10g  
**Identification No.** 3077  
**Identified uses** Photographic Developer  
**Supplier** 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  
**Contact Person** USA: ilfordhelp@wynit.com; Canada: phil.nielsen@amplis.com  
**Emergency Telephone** USA/Canada: For medical emergency, call 1 800 842 9660 (Product Misuse).

---

#### 2. HAZARD(S) IDENTIFICATION

---

**Appearance** Crystals. Powder, dust  
**Color** White / off-white. Cream. Brown.  
**Odor** No characteristic odor.  
**Contains**

#### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

##### WHMIS Label



Materials Causing Other  
Toxic Effects.

##### Controlled Product Classification

Canadian WHMIS Classification D2B

##### Inhalation

Dust may irritate respiratory system or lungs.

##### Ingestion

Harmful if swallowed. May cause discomfort if swallowed.

##### Skin Contact

Powder may irritate skin. May cause sensitization by skin contact. May cause allergic contact eczema.

##### Eye Contact

Irritation of eyes and mucous membranes. Repeated exposure may cause chronic eye irritation.

##### Health Warnings

Prolonged or repeated exposure may cause severe irritation. May cause skin irritation/eczema. May cause sensitization by skin contact. Dust may irritate respiratory system or lungs. May cause allergy. May cause hypersensitivity.

##### Route Of Entry

Inhalation. Ingestion. Skin and/or eye contact.

##### Medical Considerations

May aggravate existing: Skin disorders and allergies. Pre-existing eye problems.

## Microphen Developer (Part A)

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

|   |                          |
|---|--------------------------|
| <b>1-PHENYL-3-PYRAZOLIDONE</b>  | <b>1-5%</b>              |
| <b>CAS No.: 92-43-3</b>   | <b>EC No.: 202-155-1</b> |
| GHS Classification<br>Acute Tox. 4 - H302; Aquatic Chronic 2 - H411   |                          |
| <b>Boric Acid</b>   | <b>1-5%</b>              |
| <b>CAS No.: 10043-35-3</b>  | <b>EC No.: 233-139-2</b> |
| GHS Classification<br>Repr. 1B - H360FD   |                          |
| <b>HYDROQUINONE</b>   | <b>50-70%</b>            |
| <b>CAS No.: 123-31-9</b>  | <b>EC No.: 204-617-8</b> |
| GHS Classification<br>Acute Tox. 4 - H302; Eye Dam. 1 - H318; Skin Sens. 1 - H317; Muta. 2 - H341; Carc. 2 - H351; Aquatic Acute 1 - H400 |                          |
| <b>SODIUM METABISULPHITE</b>  | <b>30-40%</b>            |
| <b>CAS No.: 7681-57-4</b>   | <b>EC No.: 231-673-0</b> |
| GHS Classification<br>Acute Tox. 4 - H302; Eye Dam. 1 - H318  |                          |

#### Composition Comments

Hazardous according to the criteria of Worksafe Australia

### 4. FIRST-AID MEASURES

#### Description of first aid measures

##### **Inhalation**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

##### **Ingestion**

Rinse mouth thoroughly. Get medical attention if any discomfort continues.

##### **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.

#### Most important symptoms and effects, both acute and delayed

##### **Inhalation**

No specific symptoms noted.

## Microphen Developer (Part A)

### Ingestion

No specific symptoms noted.

### Skin Contact

May cause skin sensitisation.

### Eye Contact

Irritation of eyes and mucous membranes.

### Indication of any immediate medical attention and special treatment needed

#### Notes To The Physician

No specific first aid measures noted.

---

## 5. FIRE-FIGHTING MEASURES

---

### Extinguishing Media

Use fire-extinguishing media appropriate for surrounding materials.

### Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

### Specific Hazards

When heated and in case of fire, harmful vapors/gases may be formed. Oxides of: Carbon. Nitrogen. Sulfur.

### Special Fire Fighting Procedures

Avoid breathing fire vapors.

### Protective Equipment For Fire-Fighters

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

Wear protective clothing as described in Section 8 of this material safety data sheet. Avoid contact with skin and eyes. Provide adequate ventilation.

### 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. Small quantities may be flushed to drains with plenty of water. Prevent discharge of larger quantity to drain. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Wash contaminated area with water. Do not let washing down water contaminate ponds or waterways.

### Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

---

## 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 under well-ventilated conditions at a temperature below 25°C.

### Storage Class

Chemical storage.

### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

### Protective Equipment



## Microphen Developer (Part A)

### Engineering Measures

Provide adequate general and local exhaust ventilation.

### Respiratory Equipment

Wear suitable respiratory protection.

### Hand Protection

Use protective gloves.

### Eye Protection

Use eye protection.

### Other Protection

Wear appropriate clothing to prevent reasonably probable skin contact.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

|                                 |                                  |
|---------------------------------|----------------------------------|
| <b>Appearance</b>               | Crystals. Powder, dust           |
| <b>Color</b>                    | White / off-white. Cream. Brown. |
| <b>Odor</b>                     | No characteristic odor.          |
| <b>Solubility</b>               | Soluble in water. 100%           |
| <b>pH-Value, Conc. Solution</b> | 5.8                              |
|                                 | Not available.                   |

---

## 10. STABILITY AND REACTIVITY

---

### Reactivity

No specific reactivity hazards associated with this product.

### Stability

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

### Hazardous Polymerisation

Will not polymerise.

### Conditions To Avoid

Avoid excessive heat for prolonged periods of time. Avoid contact with acids.

### Materials To Avoid

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

### Hazardous Decomposition Products

Fire or high temperatures create: Vapors/gases/fumes of: Oxides of: Sulfur. Carbon. Nitrogen.

---

## 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 that comprise the mixture.

#### Toxicological Information on Ingredients:

##### **Toxic Dose 1 - LD 50**

320 mg/kg (oral rat)

##### **Toxic Dose 2 - LD 50**

>900 mg/kg (skn-rat)

##### **Toxic Dose 1 - LD 50**

200 mg/kg (oral rat)

##### **Toxic Dose 1 - LD 50**

1540 mg/kg (oral rat)

##### **Toxic Dose 1 - LD 50**

>3000 mg/kg (oral rat)

HYDROQUINONE (CAS: 123-31-9)

1-PHENYL-3-PYRAZOLIDONE (CAS: 92-43-3)

SODIUM METABISULPHITE (CAS: 7681-57-4)

Boric Acid (CAS: 10043-35-3)

## Microphen Developer (Part A)

---

### 12. ECOLOGICAL INFORMATION

---

#### Toxicity

Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

#### Degradability

There are no data on the degradability of this product.

#### Bioaccumulative potential

No data available on bioaccumulation.

#### Mobility:

The product is soluble in water.

#### Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB Substances.

#### Other adverse effects

None known.

#### Ecological Information on Ingredients:

##### HYDROQUINONE (CAS: 123-31-9)

###### LC 50, 96 Hrs, Fish mg/l

0.10-0.18 (Fathead Minnow)

###### EC 50, 48 Hrs, Daphnia, mg/l

0.05

###### IC 50, 72 Hrs, Algae, mg/l

1.0

##### 1-PHENYL-3-PYRAZOLIDONE (CAS: 92-43-3)

###### LC 50, 96 Hrs, Fish mg/l

>1

##### SODIUM METABISULPHITE (CAS: 7681-57-4)

###### LC 50, 96 Hrs, Fish mg/l

>150

###### EC 50, 48 Hrs, Daphnia, mg/l

89

###### IC 50, 72 Hrs, Algae, mg/l

48

##### Boric Acid (CAS: 10043-35-3)

###### LC 50, 96 Hrs, Fish mg/l

600

###### EC 50, 48 Hrs, Daphnia, mg/l

115-153

---

### 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.

#### 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

Limited Quantity Exemption. No labeling or placarding required for land and air transport within the USA under 49CFR 171.4 or for land transport within Canada under SOR/2008-34.

#### UN No. (DOT/TDG)

3077

#### UN No. (IMDG)

3077

## Microphen Developer (Part A)

UN No. (ICAO) 3077  
DOT Proper Shipping Name UN3077, Environmentally hazardous substance, solid, n.o.s. (contains hydroquinone)  
TDG Proper Shipping Name UN3077, Environmentally hazardous substance, solid, n.o.s. (contains hydroquinone)  
IMDG Class 9  
ICAO Class 9  
Transport Labels



IMDG Pack Group III  
Air Pack Group III  
Environmentally Hazardous Substance/Marine Pollutant



EMS F-A, S-F

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes  
Not applicable.

---

### 15. REGULATORY INFORMATION

---

#### Regulatory Status (US)

TSCA: The ingredients of this product are on the TSCA Inventory.

#### US Federal Regulations

#### US State Regulations

#### State Regulations Comments

No information available.

---

### 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 Material Safety Data Sheet, Misc. manufacturers. Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax, 1984.

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

**Revision Date** 11/14/2013

**Revision** 6

**Supersedes Date** 10/27/2010

# ILFORD PHOTO

## HARMAN technology Ltd

### SAFETY DATA SHEET

#### Microphen Developer (Part B)

---

### 1. IDENTIFICATION

---

|                            |   |
|----------------------------|---|
| <b>Product Name</b>        | Microphen Developer (Part B)  |
| <b>Product No.</b>         | 1173875   |
| <b>Internal Id</b>         | 10120   |
| <b>Container Size</b>      | 125g  |
| <b>Identified uses</b>     | Photographic Developer  |
| <b>Supplier</b>            | Distributors<br>USA: WYNIT Inc, 5801 East Taft Road, North<br>Syracuse, NY 13212. Tel: 1 800 GO WYNIT (469<br>9648) or 1 315 437 4167, Fax: 1 315 437 0432<br>Canada: Amplis Foto Inc, 22 Telson Road,<br>Markham, Ontario L3R 1E5, Tel: 905 477 4111,<br>Fax: 905 477 2502 |
| <b>Contact Person</b>      | Dr Trevor Rhodes, HARMAN technology Ltd, Tel: +44(0)1565 650000, email:<br>trevor.rhodes@ilfordphoto.com  |
| <b>Emergency Telephone</b> | USA/Canada: For medical emergency, call 1 800 842 9660 (Product Misuse).  |

---

### 2. HAZARD(S) IDENTIFICATION

---

|                   |                         |
|-------------------|-------------------------|
| <b>Appearance</b> | Powder, dust            |
| <b>Color</b>      | White.                  |
| <b>Odor</b>       | No characteristic odor. |

#### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

##### WHMIS Label



Materials Causing Other  
Toxic Effects.

##### Controlled Product Classification

Canadian WHMIS Classification D2B

##### Inhalation

Dust may irritate respiratory system or lungs.

##### Ingestion

May cause discomfort if swallowed.

##### Skin Contact

Powder may irritate skin.

##### Eye Contact

Crystalline powder. May cause temporary eye irritation. Repeated exposure may cause chronic eye irritation.

##### Health Warnings

Dust may irritate respiratory system or lungs.

##### Route Of Entry

Inhalation. Ingestion. Skin and/or eye contact.

##### Medical Considerations

May aggravate existing: Skin disorders and allergies. Pre-existing eye problems.

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

---

## Microphen Developer (Part B)

|   |                          |
|---|--------------------------|
| <b>Disodium Tetraborate decahydrate</b> | <b>&lt;8.5%</b>          |
| <b>CAS No.: 1303-96-4</b>               | <b>EC No.: 215-540-4</b> |
| GHS Classification<br>Repr. 1B - H360FD |                          |
| <b>Sodium Sulphite</b>                  | <b>70-90%</b>            |
| <b>CAS No.: 7757-83-7</b>               | <b>EC No.: 231-821-4</b> |
| GHS Classification<br>Not classified.   |                          |

### 4. FIRST-AID MEASURES

#### Description of first aid measures

##### **Inhalation**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

##### **Ingestion**

Rinse mouth thoroughly. Get medical attention if any discomfort continues.

##### **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.

#### Most important symptoms and effects, both acute and delayed

##### **Inhalation**

No specific symptoms noted.

##### **Ingestion**

No specific symptoms noted.

##### **Skin Contact**

No specific symptoms noted.

##### **Eye Contact**

May cause temporary eye irritation.

#### Indication of any immediate medical attention and special treatment needed

##### **Notes To The Physician**

No specific first aid measures noted.

### 5. FIRE-FIGHTING MEASURES

#### **Extinguishing Media**

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

#### **Unusual Fire & Explosion Hazards**

No unusual fire or explosion hazards noted.

#### **Specific Hazards**

The product is non-combustible. If heated, irritating vapors may be formed. Oxides of: Sulfur.

#### **Special Fire Fighting Procedures**

Avoid breathing fire vapors.



## Microphen Developer (Part B)

### Protective Equipment For Fire-Fighters

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. Prevent discharge of larger quantity to drain. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Wash contaminated area with water.

### Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

---

## 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 under well-ventilated conditions at a temperature below 25°C.

### Storage Class

Chemical storage.

### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

| COMPONENT                        | STD | TWA (8-hrs)         |  | STEL (15 min) |  | Notes |
|----------------------------------|-----|---------------------|--|---------------|--|-------|
| Disodium Tetraborate decahydrate | WEL | 1 mg/m <sup>3</sup> |  |               |  |       |

WEL = Workplace Exposure Limit.

### Protective Equipment



### Engineering Measures

Provide adequate general and local exhaust ventilation.

### Respiratory Equipment

Wear suitable respiratory protection.

### Hand Protection

Use protective gloves.

### Eye Protection

Use eye protection.

### Other Protection

Wear appropriate clothing to prevent reasonably probable skin contact.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

|            |                         |
|------------|-------------------------|
| Appearance | Powder, dust            |
| Color      | White.                  |
| Odor       | No characteristic odor. |

## Microphen Developer (Part B)

**Solubility** Soluble in water. 100%  
**pH-Value, Conc. Solution** 10  
Not applicable.

---

### 10. STABILITY AND REACTIVITY

---

#### Reactivity

Generates toxic gas in contact with acid.

#### Stability

Avoid Contact with acids.

#### Hazardous Polymerisation

Will not polymerise.

#### Conditions To Avoid

Avoid contact with acids. Avoid excessive heat for prolonged periods of time.

#### Materials To Avoid

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

#### Hazardous Decomposition Products

Fire or high temperatures create: Vapors/gases/fumes of: Oxides of: Sulfur.

---

### 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 that comprise the mixture.

##### Toxicological Information on Ingredients:

##### **Toxic Dose 1 - LD 50**

2610 mg/kg (oral rat)

##### Sodium Sulphite (CAS: 7757-83-7)

##### **Toxic Dose 1 - LD 50**

2660 mg/kg (oral rat)

##### Disodium Tetraborate decahydrate (CAS: 1303-96-4)

---

### 12. ECOLOGICAL INFORMATION

---

#### Toxicity

The product is not expected to be hazardous to the environment.

#### Degradability

No data available.

#### Bioaccumulative potential

No data available on bioaccumulation.

#### Mobility:

The product is soluble in water.

#### Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB Substances.

#### Other adverse effects

Not known.

##### Ecological Information on Ingredients:

##### **LC 50, 96 Hrs, Fish mg/l**

220 - 460

##### **EC 50, 48 Hrs, Daphnia, mg/l**

69

##### Sodium Sulphite (CAS: 7757-83-7)

---

### 13. DISPOSAL CONSIDERATIONS

---

## Microphen Developer (Part B)

### 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.

### 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** The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

### Transport Labels

No transport warning sign required.

### Environmentally Hazardous Substance/Marine Pollutant

No.

### Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes

Not applicable.

---

## 15. REGULATORY INFORMATION

---

### Regulatory Status (US)

TSCA: The ingredients of this product are on the TSCA Inventory.

### US Federal Regulations

### US State Regulations

#### State Regulations Comments

No information available.

---

## 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 Material Safety Data Sheet, Misc. manufacturers. Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax, 1984.

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

**Revision Date** 11/12/2013

**Revision** 6

**Supersedes Date** 10/27/2010