

# ILFORD PHOTO

## HARMAN technology Ltd

### MATERIAL SAFETY DATA SHEET

#### Multigrade Developer

#### 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>PRODUCT NAME</b>	Multigrade Developer
<b>PRODUCT NO.</b>	10002
<b>INTERNAL ID</b>	TS-MONO-27 (IP881111)
<b>PRODUCT USE</b>	Developer Solution
<b>SUPPLIER</b>	Distributors USA: WYNIT Inc, 6847 Ellicott Drive, East Syracuse, NY 13057. Tel: 315 437 1086, Fax: 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

#### 2 HAZARDS IDENTIFICATION

##### POTENTIAL HEALTH EFFECTS

##### INHALATION

May cause irritation to the respiratory system.

##### INGESTION

Harmful if swallowed. May cause discomfort if swallowed.

##### SKIN CONTACT

Irritating to 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. Irritating to eyes.

Spray and vapor in the eyes may cause irritation and smarting.

May cause allergy. May cause hypersensitivity.

##### ROUTE OF ENTRY

Skin and/or eye contact. Ingestion.

##### MEDICAL CONSIDERATIONS

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

##### Other Health Effects

Hydroquinone: Carcinogen Category 3. Mutagen Category 3. ACGIH A3 IARC 3 IARC Animal Carcinogen List. IARC Int. Agency for Cancer Research.

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
Diethylenetriamine Pentaacetic Acid Na5	205-391-3	140-01-2	1-5%
HYDROQUINONE	204-617-8	123-31-9	1-5%
Potassium Carbonate	209-529-3	584-08-7	5-10%
Water	231-791-2	7732-18-5	70-90%

## Multigrade Developer

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### 4 FIRST-AID MEASURES

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#### INHALATION

Unlikely route of exposure as the product does not contain volatile substances. Move the exposed person to fresh air at once. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

#### INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Rinse mouth thoroughly. Drink a few glasses of water or milk. 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.

#### 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.

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### 5 FIRE-FIGHTING MEASURES

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#### 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.

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### 6 ACCIDENTAL RELEASE MEASURES

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#### 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.

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### 7 HANDLING AND STORAGE

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#### 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.

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### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### PROCESS CONDITIONS

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

#### PROTECTIVE EQUIPMENT

## Multigrade Developer



### 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.

### 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. The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374.

### EYE PROTECTION

Use approved safety goggles or face shield.

### OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

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## 9 PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE</b>	Clear liquid		
<b>COLOR</b>	Colorless to pale yellow		
<b>ODOR</b>	No characteristic odor.		
<b>SOLUBILITY</b>	100% Soluble in water		
<b>BOILING POINT (°C)</b>	$>100$ 760 mm Hg	<b>RELATIVE DENSITY</b>	1.235 20
<b>pH-VALUE, CONC. SOLUTION</b>	10		

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## 10 STABILITY AND REACTIVITY

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### STABILITY

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

### CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time. Avoid contact with acids. Generates toxic gas in contact with acid.

### HAZARDOUS POLYMERISATION

Will not polymerize.

### MATERIALS TO AVOID

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

### HAZARDOUS DECOMPOSITION PRODUCTS

Fire or high temperatures may form toxic and corrosive vapors. Oxides of: Sulphur. Sulphur dioxide.

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## 11 TOXICOLOGICAL INFORMATION

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### 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>	HYDROQUINONE
<b>Toxic Dose 1 - LD 50</b>	320 mg/kg (oral rat)

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## 12 ECOLOGICAL INFORMATION

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<b>LC 50, 96 hrs, Fish mg/l</b>	0.1 hydroquinone; $>300$ DTPA
<b>EC 50, 48 hrs, Daphnia, mg/l</b>	$>10$ DTPA
<b>IC 50, 72 hrs, Algae, mg/l</b>	1.0 hydroquinone

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## 13 DISPOSAL CONSIDERATIONS

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## Multigrade Developer

### 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. The UK's Photo Imaging Council (PIC) has produced detailed guidance in a Code of Practice for the Photoprocessing Industry for the Care of the Environment (COPPICE). For up to date, general and specialist 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

Unused 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.

### WASTE CLASS

EU Waste Number: 090101

## 14 TRANSPORT INFORMATION

<b>ROAD TRANSPORT NOTES</b>	Not classified for road transport		
<b>RAIL TRANSPORT NOTES</b>	Not classified for rail transport		
<b>SEA TRANSPORT NOTES</b>	Not classified for sea transport		
<b>AIR TRANSPORT NOTES</b>	Not classified for air transport		
<b>DOT HAZARD CLASS</b>	No classification noted.	<b>U.S DOT HAZARD LABEL</b>	No DOT label requirement noted

## 15 REGULATORY INFORMATION

### REGULATORY STATUS (US)

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

### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

#### LABEL(S) FOR SUPPLY



Materials  
Causing Other  
Toxic Effects.

### CONTROLLED PRODUCT CLASSIFICATION

This Product has been classified according to the hazard criteria of the Controlled Products Regulations and the MSDS contains all required information.

## 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

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