

ILFORD PHOTO

HARMAN technology Ltd

SAFETY DATA SHEET

Multigrade Developer

1. IDENTIFICATION

Product Name	Multigrade Developer
Product No.	1918555, 1155073, 1757855
Internal Id	10002
Container Size	500ml 1 Liter 5 Liter
Identified uses	Developer Solution
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	Clear liquid.
Color	Colourless to pale yellow.
Odor	No characteristic odor.
Contains	HYDROQUINONE

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

WHMIS Label



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.

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.

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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

1-Phenyl-4-Methyl-4-Hydroxymethyl-3-Pyrazolidone	< 1
CAS No.: 13047-13-7	EC No.: 235-920-3
GHS Classification Acute Tox. 4 - H302; Skin Sens. 1 - H317; Aquatic Chronic 2 - H411	
Diethylenetriamine Pentaacetic Acid Na5	1-5%
CAS No.: 140-01-2	EC No.: 205-391-3
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2 - H319	
HYDROQUINONE	1-5%
CAS No.: 123-31-9	EC No.: 204-617-8
GHS Classification Acute Tox. 4 - H302; Eye Dam. 1 - H318; Skin Sens. 1 - H317; Muta. 2 - H341; Carc. 2 - H351; Aquatic Acute 1 - H400	
Potassium Carbonate	5-10%
CAS No.: 584-08-7	EC No.: 209-529-3
GHS Classification Skin Irrit. 2 - H315; Eye Irrit. 2 - H319	

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

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Inhalation

No specific symptoms noted.

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

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

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.

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

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Engineering Measures

Provide adequate ventilation. Must not be handled in confined space without sufficient ventilation.

Respiratory Equipment

Respiratory protection not required.

Hand Protection

Use protective gloves.

Eye Protection

Use eye protection.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid.
Color	Colourless to pale yellow.
Odor	No characteristic odor.
Solubility	100% Soluble in water.
Initial boiling point and boiling range	>100 760 mm Hg
Relative density	1.235 20
pH-Value, Conc. Solution	10

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: Sulfurous gases (SO_x).

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.

Other Health Effects

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

Toxicological Information on Ingredients:

HYDROQUINONE (CAS: 123-31-9)

Toxic Dose 1 - LD 50

320 mg/kg (oral rat)

Toxic Dose 2 - LD 50

>900 mg/kg (skn-rat)

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1-Phenyl-4-Methyl-4-Hydroxymethyl-3-Pyrazolidone (CAS: 13047-13-7)

Toxic Dose 1 - LD 50

1000 mg/kg (oral rat)

Toxic Dose 2 - LD 50

>2000 mg/kg (skn-rat)

Diethylenetriamine Pentaacetic Acid Na5 (CAS: 140-01-2)

Toxic Dose 1 - LD 50

>4000 mg/kg (oral rat)

Potassium Carbonate (CAS: 584-08-7)

Toxic Dose 1 - LD 50

2570 mg/kg (oral-mouse)

Toxic Dose 2 - LD 50

1870 mg/kg (oral rat)

12. ECOLOGICAL INFORMATION

Toxicity

The product contains a substance that is very toxic to aquatic organisms.

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-4-Methyl-4-Hydroxymethyl-3-Pyrazolidone (CAS: 13047-13-7)

LC 50, 96 Hrs, Fish mg/l

32 (Rainbow Trout)

EC 50, 48 Hrs, Daphnia, mg/l

1.7

Diethylenetriamine Pentaacetic Acid Na5 (CAS: 140-01-2)

LC 50, 96 Hrs, Fish mg/l

>1000 (Iepomis macrochirus)

EC 50, 48 Hrs, Daphnia, mg/l

>500 (Daphnia magna)

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.

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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).
Road Transport Notes	Not classified for road transport
Rail Transport Notes	Not classified for rail transport
Sea Transport Notes	Not classified for sea transport
Air Transport Notes	Not classified for air transport
DOT Hazard Class	No classification noted.
DOT Hazard Label	No DOT label requirement noted
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

Material Safety Data Sheet, Misc. manufacturers. European Photographic Chemical Industry Code of Practice For Classification And Labelling Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax, 1984.

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