

# ILFORD PHOTO

## HARMAN technology Ltd

### SAFETY DATA SHEET

#### Multigrade Paper Developer

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

#### 1. Identification

##### Product identifier

**Product name** Multigrade Paper Developer

**Product number** 1918555, 1155073, 1757855

**Internal identification** 10002

**Container size** 500ml, 1 Liter, 5 Liter

##### Recommended use of the chemical and restrictions on use

**Application** Developer Solution

##### Details of the supplier of the safety data sheet

##### **Supplier**

Distributor  
USA: Robert Distributors, 220 East Saint Clair St, Indianapolis, IN 46204  
Tel: 877-281-6405

##### **Contact Person**

Contact Distributor: sales@robertsdistributors.com

##### Emergency telephone number

**Emergency telephone** USA/Canada: For medical emergency, call 1 800 842 9660 (Product Misuse).

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

**Physical hazards** Not Classified

**Health hazards** Eye Irrit. 2A - H319 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351 Repr. 2 - H361fd  
STOT RE 2 - H373

**Environmental hazards** Not Classified

##### Label elements

##### **Pictogram**



##### **Signal word**

Warning

##### **Hazard statements**

H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H341 Suspected of causing genetic defects.  
H351 Suspected of causing cancer.  
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

## Multigrade Paper Developer

### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
 P280 Wear protective clothing, gloves, eye and face protection.  
 P302+P352 If on skin: Wash with plenty of water.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P405 Store locked up.  
 P501 Dispose of contents/ container in accordance with local regulations.

### Contains

pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate, HYDROQUINONE, 1-Phenyl-4-methyl-4-hydroxymethyl-3-pyrazolidone

### Other hazards

No information available.

### 3. Composition/information on ingredients

#### Mixtures

<b>Sodium Sulfite</b> CAS number: 7757-83-7	10-30%
<b>Classification</b> Not Classified	
<b>Potassium Carbonate</b> CAS number: 584-08-7	5-10%
<b>Classification</b> Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335	
<b>pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate</b> CAS number: 140-01-2	1-5%
<b>Classification</b> Acute Tox. 4 - H332 Repr. 2 - H361fd STOT RE 2 - H373	
<b>HYDROQUINONE</b> CAS number: 123-31-9 M factor (Acute) = 10	< 2.5%
<b>Classification</b> Acute Tox. 4 - H302 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351 Aquatic Acute 1 - H400	

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<b>SODIUM HYDROXIDE</b>	<b>&lt;1%</b>
CAS number: 1310-73-2	
<b>Classification</b> Skin Corr. 1A - H314 Eye Dam. 1 - H318	
<b>1-Phenyl-4-methyl-4-hydroxymethyl-3-pyrazolidone</b>	<b>&lt;1%</b>
CAS number: 13047-13-7	
<b>Classification</b> Acute Tox. 4 - H302 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
<b>Skin Contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.
<b>Eye contact</b>	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

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

<b>Inhalation</b>	No specific symptoms known.
<b>Ingestion</b>	No specific symptoms known.
<b>Skin contact</b>	May cause sensitisation by skin contact.
<b>Eye contact</b>	Irritation of eyes and mucous membranes.

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

<b>Notes for the doctor</b>	No specific recommendations.
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### 5. Fire-fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	The product is non-combustible. Use extinguishing media appropriate for surrounding fire.
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#### Special hazards arising from the substance or mixture

<b>Specific hazards</b>	The product is non-combustible. No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Oxides of: Carbon. Sulfur. Nitrogen. Sodium. Potassium.

#### Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapors.
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**Special protective equipment for firefighters** 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, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin and eyes. Provide adequate ventilation. For personal protection, see Section 8.

#### Environmental precautions

**Environmental precautions** Do not discharge into drains or watercourses or onto the ground. Collect and dispose of spillage as indicated in Section 13.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing, gloves, eye and face protection.  
Small Spillages: Flush away spillage with plenty of water.  
Large Spillages: Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Provide adequate ventilation. Avoid spilling. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Read and follow manufacturer's recommendations.

#### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store in tightly-closed, original container. Storage advice to ensure the product remains in a useable condition throughout its specified shelf life: Store at temperatures above 0°C. Store at temperatures not exceeding 30°C.

**Storage class** Chemical storage.

#### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

### 8. Exposure Controls/personal protection

#### Control parameters

#### Occupational exposure limits

##### HYDROQUINONE

Long-term exposure limit (8-hour TWA): OSHA 2 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m<sup>3</sup>

A3, DSens

##### SODIUM HYDROXIDE

Ceiling exposure limit: ACGIH 2 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): OSHA 2 mg/m<sup>3</sup>

OSHA = Occupational Safety and Health Administration.

ACGIH = American Conference of Governmental Industrial Hygienists.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

DSens = Dermal sensitizer.

#### Exposure controls

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### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation. This product must not be handled in a confined space without adequate ventilation.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

#### Hand protection

Use protective gloves.

#### Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

#### Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Appearance	Clear liquid.
Color	Colorless to pale yellow.
Odor	No characteristic odor.
pH	pH (concentrated solution): 10
Initial boiling point and range	>100°C @ 760 mm Hg
Relative density	1.235 @ 20°C
Solubility(ies)	100% Soluble in water.
Other information	Not available.

## 10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable under the prescribed storage conditions. No particular stability concerns.
Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
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	Thermal decomposition or combustion products may include the following substances: Oxides of: Carbon. Sulfur. Nitrogen. Potassium. Sodium.

## 11. Toxicological information

### Information on toxicological effects

Toxicological effects	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.
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#### Acute toxicity - oral

## Multigrade Paper Developer

ATE oral (mg/kg) 15,399.78

### Acute toxicity - inhalation

ATE inhalation (gases ppm) 158,579.13

ATE inhalation (vapours mg/l) 387.64

ATE inhalation (dusts/mists mg/l) 52.86

### Germ cell mutagenicity

Genotoxicity - in vitro The product contains a substance that is classified as: Suspected of causing genetic defects.

### Carcinogenicity

Carcinogenicity The product contains a substance that is classified as: Suspected of causing cancer.

### Reproductive toxicity

Reproductive toxicity - development The product contains a substance that is classified as: Suspected of damaging fertility or the unborn child.

### Specific target organ toxicity - repeated exposure

STOT - repeated exposure The product contains a substance that is classified as: May cause damage to organs through prolonged or repeated exposure if inhaled.

Inhalation May cause respiratory system irritation.

Ingestion May cause discomfort if swallowed.

Skin Contact Irritating to skin. May cause sensitisation by skin contact. May cause allergic contact eczema.

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

Acute and chronic health hazards Prolonged or repeated exposure may cause severe irritation. May cause skin irritation/eczema. May cause sensitisation by skin contact. Irritating to eyes. Vapor or spray 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.

### pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate

#### Acute toxicity - inhalation

ATE inhalation (gases ppm) 4,500.0

ATE inhalation (vapours mg/l) 11.0

ATE inhalation (dusts/mists mg/l) 1.5

### HYDROQUINONE

#### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 375.0

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<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	375.0
<b><u>Carcinogenicity</u></b>	
<b>IARC carcinogenicity</b>	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
<b><u>1-Phenyl-4-methyl-4-hydroxymethyl-3-pyrazolidone</u></b>	
<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	566.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	566.0

### 12. Ecological Information

**Toxicity** The product contains a substance which is very toxic to aquatic organisms.

#### **pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate**

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: >1000 (Iepomis macrochirus) mg/l, Fish
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: >500 (daphnia magna) mg/l, Daphnia magna

#### **HYDROQUINONE**

##### **Acute aquatic toxicity**

<b>LE(C)<sub>50</sub></b>	0.01 < L(E)C <sub>50</sub> ≤ 0.1
<b>M factor (Acute)</b>	10
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 0.10-0.18 (Fathead Minnow) mg/l, Fish
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 0.05 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	IC <sub>50</sub> , 72 hours: 1.0 mg/l, Algae

#### **1-Phenyl-4-methyl-4-hydroxymethyl-3-pyrazolidone**

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 32 (Rainbow Trout) mg/l, Fish
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 1.7 mg/l, Daphnia magna

#### **Persistence and degradability**

**Persistence and degradability** There are no data on the degradability of this product.

#### **Bioaccumulative potential**

**Bio-Accumulative Potential** No data available on bioaccumulation.

#### **Mobility in soil**

**Mobility** The product is soluble in water.

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### Other adverse effects

**Other adverse effects** None known.

### 13. Disposal considerations

#### Waste treatment methods

**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 regulations on the transport of dangerous goods (IMDG, IATA, DOT).

**Road transport notes** Not classified.

**Rail transport notes** Not classified.

**Sea transport notes** Not classified.

**Air transport notes** Not classified.

#### UN Number

Not applicable.

#### UN proper shipping name

Not applicable.

#### Transport hazard class(es)

Not applicable.

#### Transport labels

No transport warning sign required.

#### DOT transport labels

No transport warning sign required.

#### Packing group

Not applicable.

#### Environmental hazards

##### **Environmentally Hazardous Substance**

No.

#### Special precautions for user

Not applicable.

**DOT TIH Zone** Not applicable.

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78**

**and the IBC Code**

### 15. Regulatory information



## Multigrade Paper Developer

### US State Regulations

**State Regulations Comments** No information available.

### Inventories

#### US - TSCA

*Water*

*Sodium Sulfite*

*Potassium Carbonate*

*pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate*

*HYDROQUINONE*

*Potassium Bromide*

*SODIUM HYDROXIDE*

*1-Phenyl-4-methyl-4-hydroxymethyl-3-pyrazolidone*

*Benzotriazole*

### 16. Other information

<b>General information</b>	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.
<b>Key literature references and sources for data</b>	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.
<b>Issued by</b>	SHE.Team@harmantechnology.com
	7/28/2017
<b>Revision date</b>	2
<b>Revision</b>	14/05/2015
<b>Supersedes date</b>	H302 Harmful if swallowed.
<b>Hazard statements in full</b>	H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects.