

# ILFORD PHOTO

## HARMAN technology Ltd

### SAFETY DATA SHEET

#### Microphen Developer Stock

This SDS is not mandated under REACH Regulation (EC) No 1907/2006 and is provided for information only.

This SDS relates to the product after it has been prepared for use in accordance with our recommendations. Because HARMAN technology Ltd. does not supply the solution ready for use, we are not obliged to provide this SDS. However, we do so in order to help users to use the product safely and assess correctly the risks involved. Users should also have and refer to the SDS(s) for the concentrate(s) from which the working strength solution is prepared.

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

**Product name** Microphen Developer Stock

**Internal identification** 10527

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** Photographic Developer Solution

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

###### Supplier

HARMAN technology Ltd  
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Mobberley  
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Cheshire WA16 7JL  
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##### 1.4. Emergency telephone number

**Emergency telephone** See Safety Data Sheet of appropriate concentrate for details.

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Not Classified

**Environmental hazards** Not Classified

##### 2.2. Label elements

**Hazard statements** EUH208 Contains HYDROQUINONE. May produce an allergic reaction.

##### 2.3. Other hazards

No information available.

#### SECTION 3: Composition/information on ingredients

## Microphen Developer Stock

### 3.2. Mixtures

<b>Disodium Tetraborate decahydrate</b> <span style="float: right;"><b>&lt;1%</b></span>		
CAS number: 1303-96-4	EC number: 215-540-4	REACH registration number: 01-2119490790-32-XXXX
Substance of very high concern (SVHC).		
<b>Classification</b> Eye Irrit. 2 - H319 Repr. 1B - H360FD	<b>Classification (67/548/EEC or 1999/45/EC)</b> Repr. Cat. 2;R60,R61.	
<b>HYDROQUINONE</b> <span style="float: right;"><b>&lt;0.5%</b></span>		
CAS number: 123-31-9	EC number: 204-617-8	REACH registration number: 01-2119524016-51-XXXX
M factor (Acute) = 10		
<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	<b>Classification (67/548/EEC or 1999/45/EC)</b> Carc. Cat. 3;R40 Muta. Cat. 3;R68 Xn;R22 R43 Xi;R41 N;R50	
<b>Boric Acid</b> <span style="float: right;"><b>&lt;0.1%</b></span>		
CAS number: 10043-35-3	EC number: 233-139-2	REACH registration number: 01-2119486683-25-XXXX
Substance of very high concern (SVHC).		
<b>Classification</b> Repr. 1B - H360FD	<b>Classification (67/548/EEC or 1999/45/EC)</b> Repr. Cat. 2;R60,R61.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Unlikely route of exposure as the product does not contain volatile substances.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Skin contact</b>	Rinse immediately with plenty of water.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

#### 4.2. 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 skin sensitisation or allergic reactions in sensitive individuals.
<b>Eye contact</b>	May cause temporary eye irritation.

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

**Notes for the doctor** No specific recommendations.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media** The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

#### 5.2. Special hazards arising from the substance or mixture

**Specific hazards** No unusual fire or explosion hazards noted.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Oxides of: Sulphur. Carbon. Phosphorus. Sodium. Boron.

#### 5.3. Advice for firefighters

**Protective actions during firefighting** No specific firefighting precautions known.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin and eyes.

#### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains.

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

**Methods for cleaning up** Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

#### 6.4. Reference to other sections

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

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.

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

**Storage precautions** Keep out of reach of children.

**Storage class** Chemical storage.

#### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### **Disodium Tetraborate decahydrate**

Long-term exposure limit (8-hour TWA): WEL 5 mg/m<sup>3</sup>

##### **HYDROQUINONE**

Long-term exposure limit (8-hour TWA): WEL 0.5 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

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

<b>DNEL</b>	Workers - Inhalation; Short term local effects: 22.3 mg/m <sup>3</sup>
	Workers - Inhalation; Long term local effects: 22.3 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 599.6 mg/kg/day
	Consumer - Inhalation; Short term local effects: 22.3 mg/m <sup>3</sup>
	Consumer - Inhalation; Long term local effects: 22.3 mg/m <sup>3</sup>
	Consumer - Inhalation; Long term systemic effects: 6.5 mg/m <sup>3</sup>
	Consumer - Dermal; Long term systemic effects: 303.5 mg/kg/day
	Consumer - Oral; Short term systemic effects: 1.51 mg/kg/day
Consumer - Oral; Long term systemic effects: 1.51 mg/kg/day	

<b>PNEC</b>	- Fresh water; 1.35 mg/l
	- Marine water; 1.35 mg/l
	- Intermittent release; 9.1 mg/l
	- STP; 1.75 mg/l
	- Sediment (Freshwater); 1.8 mg/kg
	- Sediment (Marinewater); 1.8 mg/kg
	- Soil; 5.4 mg/kg

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

<b>DNEL</b>	Industry/Professional - Dermal; Long term systemic effects: 128 mg/kg/day
	Industry/Professional - Inhalation; Long term systemic effects: 7 mg/m <sup>3</sup>
	Industry/Professional - Inhalation; Long term local effects: 1 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 64 mg/kg/day
	General population - Inhalation; Long term systemic effects: 1.74 mg/m <sup>3</sup>
	General population - Inhalation; Long term local effects: 0.5 mg/m <sup>3</sup>

<b>PNEC</b>	- Water; 0.000114 mg/l
	- Marine water; 0.0000114 mg/l
	- Sediment (Freshwater); 0.00098 mg/kg
	- Sediment (Marinewater); 0.000097 mg/kg
	- Intermittent release; 0.00134 mg/l
	- Soil; 0.000129 mg/kg
	- STP; 0.71 mg/l

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

<b>DNEL</b>	General population - Oral; Long term systemic effects: 0.98 mg/kg/day
	General population - Dermal; Long term systemic effects: 196 mg/kg/day
	Workers - Dermal; Long term systemic effects: 392 mg/kg/day
	General population - Inhalation; Long term systemic effects: 4.15 mg/m <sup>3</sup>
	Workers - Inhalation; Long term systemic effects: 8.3 mg/m <sup>3</sup>

<b>PNEC</b>	- Soil; 5.4 mg/kg
	- STP; 10 mg/l
	- Fresh water; 2.02 mg/l
	- Marine water; 2.02 mg/l

## 8.2. Exposure controls

### Protective equipment



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<b>Appropriate engineering controls</b>	Provide adequate ventilation. This product must not be handled in a confined space without adequate ventilation.
<b>Eye/face protection</b>	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
<b>Hand protection</b>	Use protective gloves.
<b>Other skin and body protection</b>	Wear suitable protective clothing as protection against splashing or contamination.
<b>Hygiene measures</b>	Provide eyewash station and it is recommended that a safety shower is also available.
<b>Respiratory protection</b>	Respiratory protection not required.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid. Soluble in water.
<b>Colour</b>	Colourless.
<b>Odour</b>	No characteristic odour.
<b>pH</b>	pH (diluted solution): 8.7 - 8.9 (ie made up as directed)
<b>Melting point</b>	<0°C
<b>Initial boiling point and range</b>	>100°C @ 760 mm Hg
<b>Evaporation rate</b>	1 H <sub>2</sub> O (water)=1
<b>Vapour pressure</b>	No information available.
<b>Relative density</b>	1.106 @ 20°C
<b>Solubility(ies)</b>	Soluble in water.

#### 9.2. Other information

<b>Other information</b>	Not available.
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, no hazardous reactions will occur.
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#### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	There are no known conditions that are likely to result in a hazardous situation.
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#### 10.5. Incompatible materials

<b>Materials to avoid</b>	Avoid contact with acids. Avoid contact with other photographic solutions and/or cleaning compounds.
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#### 10.6. Hazardous decomposition products

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**Hazardous decomposition products** Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Oxides of: Sulphur. Carbon. Phosphorus. Sodium. Boron.

### SECTION 11: Toxicological information

#### 11.1. 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.

The product is not classified as hazardous to health under the CLP Regulation, because the level of hazardous component(s) is below the threshold for such classification: but see the additional information below.

**Germ cell mutagenicity**

**Genotoxicity - in vivo** 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 - fertility** The product contains substances that are classified as: May damage fertility. May damage the unborn child.

**Reproductive toxicity - development** The product contains substances that are classified as: May damage fertility. May damage the unborn child.

**Inhalation** No specific health hazards known.

**Ingestion** No specific health hazards known.

**Skin contact** The product contains a small amount of sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.

**Eye contact** Vapour or spray in the eyes may cause irritation and smarting.

**Route of entry** Skin and/or eye contact

**Medical considerations** May aggravate existing: Pre-existing eye problems.

### HYDROQUINONE

#### Acute toxicity - oral

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

**Species** Rat

**ATE oral (mg/kg)** 375.0

#### Carcinogenicity

**IARC carcinogenicity** IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### SECTION 12: Ecological Information

#### 12.1. Toxicity

**Toxicity** The product contains a substance which is very toxic to aquatic organisms. At the levels that are present, the product is not considered to be hazardous to the environment.

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### 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, Algae
<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, Fish

#### 12.2. Persistence and degradability

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

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

#### 12.4. Mobility in soil

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

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### HYDROQUINONE

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### **SECTION 13: Disposal considerations**

#### 13.1. 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. EU Waste Number: 090101

### **SECTION 14: Transport information**

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**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

#### 14.1. UN number

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Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

#### Transport labels

No transport warning sign required.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

#### Environmentally hazardous substance/marine pollutant

No.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78  
and the IBC Code

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.

#### Guidance

Workplace Exposure Limits EH40.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out for this mixture. See SUMI (Safe Use of Mixtures Information document) attached to Safety Data Sheet of appropriate concentrate.

## SECTION 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.

#### Key literature references and sources for data

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.



## Microphen Developer Stock

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<b>Revision date</b>	18/08/2017
<b>Revision</b>	2
<b>Supersedes date</b>	01/10/2015
<b>Hazard statements in full</b>	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H360FD May damage fertility. May damage the unborn child. H400 Very toxic to aquatic life. EUH208 Contains HYDROQUINONE. May produce an allergic reaction.