

ILFORD PHOTO

HARMAN technology Ltd

SAFETY DATA SHEET

MULTIGRADE DEVELOPER 1+9

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 MULTIGRADE DEVELOPER 1+9
Internal identification 10145

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

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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

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3.2. Mixtures

pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate			<1%
CAS number: 140-01-2	EC number: 205-391-3	REACH registration number: 01-2119474445-33-XXXX	
Classification Acute Tox. 4 - H332 Repr. 2 - H361fd STOT RE 2 - H373		Classification (67/548/EEC or 1999/45/EC) Xn;R20. Repr. Cat. 3;R63.	

HYDROQUINONE			<1%
CAS number: 123-31-9	EC number: 204-617-8	REACH registration number: 01-2119524016-51-XXXX	
M factor (Acute) = 10			
Classification Acute Tox. 4 - H302 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351 Aquatic Acute 1 - H400		Classification (67/548/EEC or 1999/45/EC) Carc. Cat. 3;R40 Muta. Cat. 3;R68 Xn;R22 R43 Xi;R41 N;R50	

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

Inhalation	Unlikely route of exposure as the product does not contain volatile substances.
Ingestion	Rinse mouth thoroughly with water.
Skin contact	Rinse immediately with plenty of water.
Eye contact	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

Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals.
Eye contact	May cause temporary eye irritation.

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

Notes for the doctor	No specific recommendations.
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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

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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. Nitrogen. Potassium.

5.3. Advice for firefighters

Protective actions during firefighting	No specific firefighting precautions known.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin and eyes.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains.
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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.
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Keep out of reach of children.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

HYDROQUINONE

Long-term exposure limit (8-hour TWA): WEL 0.5 mg/m³

WEL = Workplace Exposure Limit

pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate (CAS: 140-01-2)

DNEL	Workers - Inhalation; Long term systemic effects: 1.5 mg/m ³
PNEC	- Fresh water; 6.4 mg/l - Marine water; 0.64 mg/l - Water, Intermittent release; 3.1 mg/l - STP; 51 mg/l - Sediment (Freshwater); 25.1 mg/kg - Sediment (Marinewater); 2.51 mg/kg - Soil; 1.26 mg/kg

HYDROQUINONE (CAS: 123-31-9)

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DNEL

Industry/Professional - Dermal; Long term systemic effects: 128 mg/kg/day
 Industry/Professional - Inhalation; Long term systemic effects: 7 mg/m³
 Industry/Professional - Inhalation; Long term local effects: 1 mg/m³
 General population - Dermal; Long term systemic effects: 64 mg/kg/day
 General population - Inhalation; Long term systemic effects: 1.74 mg/m³
 General population - Inhalation; Long term local effects: 0.5 mg/m³

PNEC

- 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

8.2. Exposure controls

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

Respiratory protection not required.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	No characteristic odour.
pH	pH (diluted solution): 10.45 - 10.55 (made up as directed)
Melting point	<0°C
Initial boiling point and range	>100°C @ 760 mm Hg
Evaporation rate	1 (water = 1)
Vapour pressure	No information available.
Relative density	~ 1.02 @ 20°C
Solubility(ies)	Soluble in water.

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

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10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid Avoid contact with acids. Avoid contact with other photographic solutions and/or cleaning compounds.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Oxides of: Sulphur. Carbon. Nitrogen. Potassium.

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.

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 a substance that is classified as: Suspected of damaging fertility. Suspected of damaging the unborn child.

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

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.

Acute and chronic health hazards Vapour or spray in the eyes may cause irritation and smarting.

Route of entry Skin and/or eye contact

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HYDROQUINONE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 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 that is very toxic to aquatic organisms. At the levels that are present, the product is not considered to be hazardous to the environment.

HYDROQUINONE

Acute aquatic toxicity

LE(C)₅₀ 0.01 < L(E)C₅₀ ≤ 0.1

M factor (Acute) 10

Acute toxicity - fish LC₅₀, 96 hours: 0.10-0.18 (Fathead Minnow) mg/l, Algae

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.05 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 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

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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
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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

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.
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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.

Issued by

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Revision

2

Supersedes date

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Hazard statements in full

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
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.
EUH208 Contains HYDROQUINONE. May produce an allergic reaction.