

ILFORD PHOTO

HARMAN technology Ltd

SAFETY DATA SHEET

HARMAN Cooltone Developer

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME	HARMAN Cooltone Developer
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2 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
Diethylenetriamine Pentaacetic Acid Na5	205-391-3	140-01-2	1-5%	Xi;R36. N;R51/53.
HYDROQUINONE	204-617-8	123-31-9	1-5%	Carc3;R40 Muta3;R68 Xn;R22 R43 Xi;R41 N;R50
Potassium Carbonate	209-529-3	584-08-7	5-10%	Xi;R36,R38.

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS

Hazardous according to the criteria of Worksafe Australia

3 HAZARDS IDENTIFICATION

Irritating to eyes. Limited evidence of a carcinogenic effect. May cause sensitisation by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.

CLASSIFICATION Carc 3;R40, Mut 3;R68. Xi;R36. R43. R52/53.

4 FIRST-AID MEASURES

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.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

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

HARMAN Cooltone Developer

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapours.

UNUSUAL FIRE & EXPLOSION HAZARDS

No unusual fire or explosion hazards noted.

SPECIFIC HAZARDS

The product is non-combustible. If heated, harmful vapours 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.

6 ACCIDENTAL RELEASE MEASURES

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.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

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 PRECAUTIONS

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.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
HYDROQUINONE	WEL		0.5 mg/m3		

PROTECTIVE EQUIPMENT



PROCESS CONDITIONS

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

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.

9 PHYSICAL AND CHEMICAL PROPERTIES

HARMAN Cooltone Developer

APPEARANCE	Clear liquid		
COLOUR	Colourless to pale yellow		
ODOUR	No characteristic odour.		
SOLUBILITY	100% Soluble in water		
BOILING POINT (°C)	>100 760 mm Hg	RELATIVE DENSITY	1.235 20
pH-VALUE, CONC. SOLUTION	10		

10 STABILITY AND REACTIVITY**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.

HAZARDOUS POLYMERISATION

Will not polymerise.

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 vapours. Oxides of: Sulphur. Sulphur dioxide.

11 TOXICOLOGICAL INFORMATION

Name	HYDROQUINONE
Toxic Dose 1 - LD 50	320 mg/kg (oral rat)

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.

INHALATION

May cause irritation to the respiratory system.

INGESTION

Harmful if swallowed. 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.

HEALTH WARNINGS

Prolonged or repeated exposure may cause severe irritation. May cause skin irritation/eczema. May cause sensitisation by skin contact. Irritating to eyes.

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

May cause allergy. May cause hypersensitivity.

Other Health Effects

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

ROUTE OF ENTRY

Skin and/or eye contact. Ingestion.

MEDICAL CONSIDERATIONS

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

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

Not regarded as dangerous for the environment.

LC 50, 96 Hrs, FISH mg/l	0.1 hydroquinone; >300 DTPA
EC 50, 48 Hrs, DAPHNIA, mg/l	>10 DTPA
IC 50, 72 Hrs, ALGAE, mg/l	1.0 hydroquinone

13 DISPOSAL CONSIDERATIONS

HARMAN Cooltone Developer

GENERAL INFORMATION

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

	No transport warning sign required.
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
ADR CLASS	Not classified for transportation.

15 REGULATORY INFORMATION

LABELLING



Harmful

CONTAINS

HYDROQUINONE

RISK PHRASES

R36	Irritating to eyes.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitisation by skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68	Possible risk of irreversible effects.

SAFETY PHRASES

S2	Keep out of the reach of children
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46	If swallowed, seek medical advice immediately and show this container or label.
S36/37	Wear suitable protective clothing and gloves.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

UK REGULATORY REFERENCES

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EEC.

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply. Worksafe Australia NOHSC 2012: Labelling of workplace substances. Australian Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP). Australian Approved Criteria for Classifying Hazardous Substances (NOHSC 1008). Australian List of Designated Hazardous Substances (NOHSC 10005). Australian National Code of Practice for the Preparation of Material safety Data Sheets (NOHSC 2011)

GUIDANCE NOTES

CHIP for everyone HSG(108).

HARMAN Cooltone Developer

NATIONAL REGULATIONS

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689. Workplace Exposure Limits 2005 (EH40) 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.

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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GENERATED

DATE September 22, 2005

RISK PHRASES IN FULL

R22	Harmful if swallowed.
R36	Irritating to eyes.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R50	Very toxic to aquatic organisms.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68	Possible risk of irreversible effects.