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HARMAN technology Ltd

SAFETY DATA SHEET

Bromophen Developer (Part A)

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

1.1. Product identifier

Product name Bromophen Developer (Part A)

Product number 1960549

Internal identification 10119

Container size 60g

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

Identified uses Photographic Developer

1.3. Details of the supplier of the safety data sheet

Supplier

Distributors

UK: HARMAN technology Ltd, Ilford Way, Mobberley, Cheshire, WA16 7JL, UK Tel: 01565

650000, Fax: 01565 872734. (http://www.harmantechnology.com)

Australia: CR Kennedy & Co Pty Ltd, 663 Chapel Street, South Yarra, Victoria 3141, Australia.

Tel: 03 9823 1555, Fax: 03 9827 7216

Contact person UK: HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email:

trevor.rhodes@harmantechnology.com Australia: Contact Distributor

(http://www.crkennedy.com.au) Tel +61 (0)3 9823 1555

1.4. Emergency telephone number

Emergency telephone Australia: 1-800-557346

UK and elsewhere: +44(0) 207 858 1228

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 3 - H412

2.2. Label elements

Pictogram









Signal word

Danger

Bromophen Developer (Part A)

Hazard statements H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer. H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P101 If medical advice is needed, have product container or label at hand.

P273 Avoid release to the environment.

P280 Wear protective clothing, gloves, eye and face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

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.

Supplemental label

information

EUH031 Contact with acids liberates toxic gas.

Contains HYDROQUINONE, SODIUM METABISULPHITE, 1-PHENYL-3-PYRAZOLIDONE

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROQUINONE 60-100%

CAS number: 123-31-9 EC number: 204-617-8 REACH registration number: 01-

2119524016-51-XXXX

M factor (Acute) = 10

Classification Classification (67/548/EEC or 1999/45/EC)

Acute Tox. 4 - H302 Carc. Cat. 3;R40 Muta. Cat. 3;R68 Xn;R22 R43 Xi;R41

Eye Dam. 1 - H318 N;R50

Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 2 - H351

Aquatic Acute 1 - H400

SODIUM METABISULPHITE 10-30%

CAS number: 7681-57-4 EC number: 231-673-0 REACH registration number: 01-

2119531326-45-XXXX

Classification Classification (67/548/EEC or 1999/45/EC)

Acute Tox. 4 - H302 Xn;R22 Xi;R41 R31

Eye Dam. 1 - H318

Bromophen Developer (Part A)

1-PHENYL-3-PYRAZOLIDONE 1-5%

CAS number: 92-43-3 EC number: 202-155-1

Classification Classification (67/548/EEC or 1999/45/EC)

Acute Tox. 4 - H302 Xn;R22 N;R51/53

Aquatic Chronic 2 - H411

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 Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion Rinse mouth thoroughly with water. 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. Get medical attention if irritation persists after washing.

Eye contact Remove affected person from source of contamination. Remove any contact lenses and open

eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation

persists after washing.

4.2. Most important symptoms and effects, both acute and delayed

InhalationNo specific symptoms known.IngestionNo specific symptoms known.

Skin contact May cause sensitisation by skin contact.

Eye contact Irritation of eyes and mucous membranes. May cause serious eye damage.

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
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 Thermal decomposition or combustion products may include the following substances: Oxides

products of the following substances: Carbon. Sulphur. Nitrogen. Sodium.

5.3. Advice for firefighters

Protective actions during Avoid breathing fire gases or vapours.

firefighting

Special protective equipment Use protective equipment appropriate for surrounding materials. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin and eyes. Avoid inhalation of dust. Provide adequate ventilation.

6.2. Environmental precautions

Bromophen Developer (Part A)

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing, gloves, eye and face protection. Remove spillage with vacuum

cleaner or collect with a shovel and broom, or similar. 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 contact with skin and eyes. Do not eat, drink or smoke when using this product. Do not

breathe dust. Provide adequate ventilation. Avoid spilling. Read and follow manufacturer's

recommendations.

7.2. 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 not exceeding

30°C.

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

HYDROQUINONE

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

SODIUM METABISULPHITE

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

WEL = Workplace Exposure Limit

HYDROQUINONE (CAS: 123-31-9)

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/kgSediment (Marinewater); 0.000097 mg/kg

- Intermittent release; 0.00134 mg/l

- Soil; 0.000129 mg/kg

- STP; 0.71 mg/l

SODIUM METABISULPHITE (CAS: 7681-57-4)

PNEC - Fresh water; 1 mg/l

- Marine water; 0.1 mg/l

- STP; 74.5 mg/l

8.2. Exposure controls

Protective equipment









Appropriate engineering

controls

Provide adequate general and local exhaust 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 appropriate clothing to prevent skin contamination.

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

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Crystals. Dusty powder.

Colour White/off-white. Cream. Brown.

Odour No characteristic odour.

pH pH (concentrated solution): 5.8

Solubility(ies) Soluble in water. 100%

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The reactivity data for this product will be typical of those for the following class of materials:

Reducing agents.

10.2. Chemical stability

Stability Stable under the prescribed storage conditions. No particular stability concerns.

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 Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

Bromophen Developer (Part A)

Hazardous decomposition

products

Thermal decomposition or combustion products may include the following substances: Vapours/gases/fumes of: Oxides of the following substances: Carbon. Sulphur. Nitrogen.

Sodium.

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.

Acute toxicity - oral

ATE oral (mg/kg) 411.04

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.

Inhalation Dust may irritate the respiratory system.

Ingestion Harmful if swallowed. May cause discomfort if swallowed.

Skin contact Powder may irritate 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. May cause serious eye damage.

Acute and chronic health

hazards

Prolonged or repeated exposure may cause severe irritation. May cause skin

irritation/eczema. May cause sensitisation by skin contact. Dust may irritate the respiratory

system. May cause allergy. May cause hypersensitivity.

Route of entry Inhalation Ingestion. Skin and/or eye contact

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

HYDROQUINONE

Acute toxicity - oral

Acute toxicity oral (LD₅o

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.

SODIUM METABISULPHITE

Acute toxicity - oral

Acute toxicity oral (LD₅o

1,540.0

mg/kg)

Species Rat

ATE oral (mg/kg) 1,540.0

Bromophen Developer (Part A)

1-PHENYL-3-PYRAZOLIDONE

Acute toxicity - oral

Acute toxicity oral (LD50

mg/kg)

475.0

Species Rat

ATE oral (mg/kg) 475.0

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Dangerous for the environment. The product contains a substance that is very toxic to aquatic

organisms.

HYDROQUINONE

Acute aquatic toxicity

 $LE(C)_{50}$ 0.01 < $L(E)C50 \le 0.1$

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

SODIUM METABISULPHITE

Acute toxicity - fish LC50, 96 hours: >150 mg/l, Algae

Acute toxicity - aquatic

invertebrates

EC₅₀, 48 hours: 89 mg/l, Daphnia magna

Acute toxicity - aquatic

plants

IC₅₀, 72 hours: 48 mg/l, Fish

1-PHENYL-3-PYRAZOLIDONE

Acute toxicity - fish LC₅₀, 96 hours: >1 mg/l, Algae

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

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

This product does not contain any substances classified as PBT or vPvB.

assessment

HYDROQUINONE

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

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 handled by a licensed hazardous waste contractor.

Waste class 090101

SECTION 14: Transport information

General Exceptions relating to marine pollutants in small packages apply to this product, so that it is

not required to be labelled or transported in accordance with dangerous goods regulations.

See ADR SP 375, IATA SP A197, and IMDG 2.10.2.7.

14.1. UN number

UN No. (ADR/RID) 3077

UN No. (IMDG) 3077

UN No. (ICAO) 3077

14.2. UN proper shipping name

Proper shipping name

(ADR/RID)

UN3077, Environmentally hazardous substance, solid, n.o.s. (contains hydroquinone)

Proper shipping name (IMDG) UN3077, Environmentally hazardous substance, solid, n.o.s. (contains hydroquinone)

Proper shipping name (ICAO) UN3077, Environmentally hazardous substance, solid, n.o.s. (contains hydroquinone)

Proper shipping name (ADN) UN3077, Environmentally hazardous substance, solid, n.o.s. (contains hydroquinone)

14.3. Transport hazard class(es)

ADR/RID class 9(M7)

ADR/RID label 9

IMDG class 9

ICAO class/division 9

Transport labels



14.4. Packing group

ADR/RID packing group

IMDG packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-A, S-F

Tunnel restriction code (E)

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.

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)

15.2. Chemical safety assessment

See the appended document: Safe Use of Mixtures Information (SUMI)

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 HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email:

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Revision date 27/09/2017

Revision 2

Supersedes date 14/05/2015

Hazard statements in full H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer. H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.



Safe Use of Mixtures Information (SUMI)

Photoprocessing Solutions from Liquid or Powder Concentrates: Manual Processing (Professional Use)

Disclaimer

This SUMI is a generic document for communicating conditions of safe use of a product in response to the REACH obligation. This document relates only to conditions of safe use and is not specific to a product. By adding this SUMI to a specific product Safety Data Sheet (SDS), the importer/formulator declares that the mixture can safely be used following the instructions below. Following occupational health legislation, the employer of workers remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product. Derived No Effect Levels (DNEL) and Predicted No Effect Concentration (PNEC) values of substances derived from the Chemical Safety Assessment (CSA) will be given in section 8 of the SDS. The REACH registration numbers, where applicable, complete an extended product SDS.

3	,
Operational conditions	
Maximum duration	1 hour per day for diluting liquid concentrates or dissolving powders (when applicable).
	1 hour per day for mixing and disposal activities.
	6 hours per day for application (= processing).
Frequency of exposure	Dissolving powders: 25 days per year.
	Diluting liquids and all other activities: 50 days per year.
Physical state	As supplied: liquid concentrates or powder concentrates.
	As used, after making up: aqueous working solution.
Process conditions	Covers use at ambient temperatures.
	Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
	Keep emissions below the occupational exposure limits of the ingredients
	specified in section 8 of the SDS.
	Avoid direct contact.
	Regular cleaning of equipment and work area.

Risk management measures

Conditions and measures related to Personal Protection Equip

Personal Protection Equipment (PPE), hygiene and health evaluation

Wear safety glasses with side shields.

Wear appropriate chemical resistant gloves: see section 8 of the SDS.

Wear lab coat or overall.

No respiratory protective equipment is required under normal conditions of use, provided that adequate ventilation is in place.

Eye wash station and emergency showers are recommended. Avoid breathing dust (when handling powders), mist/vapours.

Avoid contact with skin, eyes and clothing.

Training of worker in relation to proper use and maintenance of the PPE must be ensured.







Good practice advice

Use personal protective equipment as required.

Wash hands before breaks and after work.

Keep good hygiene and safety practice.

Use only with adequate ventilation.

Do not eat, drink or smoke when using this product.





Environmental measures

Do not allow this material to drain into sewers/water supplies.

Ensure collection and disposal with appropriately licenced waste contractor.

Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

Use descriptors

PW-Widespread use by professional workers.

SU7-Printing and reproduction of recorded media.

PC30-Photochemicals.

PROC5-Mixing or blending in batch processes.

PROC8a-Transfer of substance or mixture (charging and discharging) at non-dedicated facilities.

PROC8b-Transfer of substance or mixture (charging and discharging) at dedicated facilities.

PROC13-Treatment of articles by dipping and pouring.

ERC8a-Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).

ERC8b-Widespread use of reactive processing aid (no inclusion into or onto article, indoor).

Additional information on product composition

In section 2 of the SDS as well as on the label, the classification of the mixture as supplied is provided.

See section 3 of the SDS for information on the product's composition. Note that this information will be for the concentrate supplied, which is used to create the working strength (WS) solution.

Relevant limit values of ingredients on which the exposure assessment is based, are listed in section 8 of the SDS.

The product may contain sensitizing ingredients that may cause allergic reaction to certain people.

Section 2 of the SDS states these ingredients where applicable.



Safe Use of Mixtures Information (SUMI)

Photoprocessing Solutions from Liquid or Powder Concentrates: Manual Processing (Consumer Use)

Disclaimer

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Operational conditions	
Maximum duration	15 minutes per day for dissolving powders (when applicable).
	15 minutes per day for mixing and disposal activities.
	4 hours per day for application (= processing).
Frequency of exposure	Dissolving powders: 12 days per year.
	Diluting liquids and all other activities: 25 days per year.
Physical state	As supplied: liquid concentrate or powder concentrate.
	As used, after making up: aqueous working strength solution.
Process conditions	Covers use at ambient temperatures.
	Provide a good standard of ventilation.
	Avoid direct contact.
	Regular cleaning of equipment and work area.

Risk management measures

Conditions and measures related to Personal Protection Equipment (PPE), hygiene and health evaluation

Wear safety glasses with side shields.

Wear appropriate chemical resistant gloves: see section 8 of the SDS.

Wear lab coat or overall. Provide adequate ventilation.

Avoid breathing dust (when handling powders), mist/vapours.

Avoid contact with skin, eyes and clothing.







Good practice advice

Use Personal Protective Equipment as required.

Wash hands before breaks and after work.

Use only with adequate ventilation.

Do not eat, drink or smoke when using this product.





Environmental measures

Do not allow this material to drain into sewers/water supplies.

Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

Use descriptors

C-Consumer use.

SU7-Printing and reproduction of recorded media.

PC30-Photochemicals.

PROC5-Mixing or blending in batch processes.

PROC8a-Transfer of substance or mixture (charging and discharging) at non-dedicated facilities.

PROC13-Treatment of articles by dipping and pouring.

ERC8a-Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).

ERC8b-Widespread use of reactive processing aid (no inclusion into or onto article, indoor).

Additional information on product composition

In section 2 of the SDS as well as on the label, the classification of the mixture as supplied is provided.

See section 3 of the SDS for information on the product's composition.

Note that this information will be for the concentrate supplied, which is used to create the working strength (WS) solution.

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