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HARMAN technology Ltd

SAFETY DATA SHEET
Bromophen Developer (Part A)
According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Bromophen Developer (Part A)

Product number 1960549

Internal identification 10119

Container size 12g

Recommended use of the chemical and restrictions on use

Application Photographic Developer

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 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

Label elements

Pictogram

Signal word Danger

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.

Bromophen Developer (Part A)

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

Contact with acids liberates toxic gas

Contains

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

Other hazards

No information available.

3. Composition/information on ingredients

Mixtures

HYDROQUINONE **60-100%**

CAS number: 123-31-9

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

SODIUM METABISULPHITE **10-30%**

CAS number: 7681-57-4

Classification
Acute Tox. 4 - H302
Eye Dam. 1 - H318

1-PHENYL-3-PYRAZOLIDONE **1-5%**

CAS number: 92-43-3

Classification
Acute Tox. 4 - H302
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

Inhalation

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

Bromophen Developer (Part A)

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.

Most important symptoms and effects, both acute and delayed

Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes. May cause serious eye damage.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.

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: Oxides of the following substances: Carbon. Sulfur. Nitrogen. Sodium.

Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapors.
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. Avoid inhalation of dust. Provide adequate ventilation.

Environmental precautions

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

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

7. Handling and storage

Precautions for safe handling

Bromophen Developer (Part A)

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.

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.

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/m³
Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m³
A3, DSens

SODIUM METABISULPHITE

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³
A4

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.
A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.
DSens = Dermal sensitizer.

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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance Crystals. Dusty powder.

Color White/off-white. Cream. Brown.

Odor No characteristic odor.

Bromophen Developer (Part A)

pH	pH (concentrated solution): 5.8
Solubility(ies)	Soluble in water. 100%
Other information	Not available.

10. Stability and reactivity

Reactivity	The reactivity data for this product will be typical of those for the following class of materials: Reducing agents.
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.
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: Vapors/gases/fumes of: Oxides of the following substances: Carbon. Sulfur. Nitrogen. 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.

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

Bromophen Developer (Part A)

Acute toxicity - oral

Acute toxicity oral (LD_{50} 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 (LD_{50} mg/kg)	1,540.0
Species	Rat
ATE oral (mg/kg)	1,540.0

1-PHENYL-3-PYRAZOLIDONE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	475.0
Species	Rat
ATE oral (mg/kg)	475.0

12. Ecological Information

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 ≤ 0.1
M factor (Acute)	10
Acute toxicity - fish	LC_{50}, 96 hours: 0.10-0.18 (Fathead Minnow) mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 0.05 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 1.0 mg/l, Algae

SODIUM METABISULPHITE

Acute toxicity - fish	LC_{50}, 96 hours: >150 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 89 mg/l, Daphnia magna

Bromophen Developer (Part A)

Acute toxicity - aquatic plants	IC_{50}, 72 hours: 48 mg/l, Algae

1-PHENYL-3-PYRAZOLIDONE

Acute toxicity - fish	LC_{50}, 96 hours: >1 mg/l, Fish

Persistence and degradability

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

Bioaccumulative potential

Bio-Accumulative Potential	Bioaccumulation is unlikely.

Mobility in soil

Mobility	The product is soluble in water.

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 handled by a licensed hazardous waste contractor.

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 49CFR 171.4 (c), IATA SP A197, and IMDG 2.10.2.7.

UN Number

UN No. (TDG)	3077
UN No. (IMDG)	3077
UN No. (ICAO)	3077
UN No. (DOT)	UN3077

UN proper shipping name

Proper shipping name (TDG)	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 (DOT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (CONTAINS HYDROQUINONE, 1-PHENYL-3-PYRAZOLIDONE)

Transport hazard class(es)

DOT hazard class	9
DOT hazard label	9
TDG class	9(M7)

Bromophen Developer (Part A)

TDG label(s)	9
IMDG Class	9
ICAO class/division	9

Transport labels

DOT transport labels

Packing group

TDG Packing Group	III
IMDG packing group	III
ICAO packing group	III
DOT packing group	III

Environmental hazards

Environmentally Hazardous Substance

Special precautions for user

EmS	F-A, S-F
DOT reportable quantity	RQ: Hydroquinone (117.1708 lbs)
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US State Regulations

State Regulations Comments	No information available.

Inventories

US - TSCA

HYDROQUINONE

SODIUM METABISULPHITE

1-PHENYL-3-PYRAZOLIDONE

16. Other information

Bromophen Developer (Part A)

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	SHE.Team@harmantechnology.com
Revision date	9/27/2017
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.