

Imagelink EcoPos 305 DEV
SUBID:000000005719

Version 1

Print Date 04-22-2013

Revision Date 04-16-2013

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION
Identification of the substance/preparation

Product name : Imagelink EcoPos 305 DEV
 MSDS Number : 000000005719
 Use of the : Photographic developer concentrate
 Substance/Preparation

Company/Undertaking Identification

Eastman Park Micrographics
 100 Latona Rd
 Rochester, NY 14652-3621
 Tel.: 01 585-500-4400 (8-5 EST)
 Fax: 01 585-719-9424

Person responsible for the safety data sheet: Robert Breslawski
 E-mail: Info@epminc.com

Transport Emergency Non-transportation

Call CHEMTREC : +1 800 4249300 Health Emergency Phone : +1 303 6235716
 International : +1 703 5273887 Agfa Information Phone : +1 201 4402500

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Aqueous photographic developer concentrate, mainly consisting of:

	<u>CAS-No.</u>	<u>Concentration [%]</u>
• Hydroquinone	123-31-9	>= 5.0 - <= 10.0
• 2-Methylaminoethanol	109-83-1	>= 1.0 - <= 5.0

SECTION 3. HAZARDS IDENTIFICATION
Emergency Overview

Form : Liquid.
 Colour : Colourless to brownish
 Odour : Slight inherent odour

Acute health effects
Inhalation

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- Hydroquinone : Is expected to be irritating to the respiratory tract with symptoms of coughing, sore throat, and runny nose.
- 2-Methylaminoethanol : Is expected to be irritating to the respiratory tract with symptoms of coughing, sore throat, and runny nose.

Skin contact

- Hydroquinone : Can be irritating to the skin with symptoms of reddening, itching, and swelling. May cause skin sensitization with symptoms of rash, itching, hives, and swelling.
- 2-Methylaminoethanol : Can be irritating to the skin with symptoms of reddening, itching, and swelling.

Eye contact

- Hydroquinone : Can be irritating to the eyes with symptoms of tearing, stinging, reddening, and swelling. May cause corneal injury.
- 2-Methylaminoethanol : Can be irritating to the eyes with symptoms of reddening, itching, stinging, and swelling.

Ingestion

- Hydroquinone : May be harmful if swallowed with symptoms including nausea, vomiting, drowsiness, dizziness, disorientation, bluish skin color, and stomach pain.

Chronic health hazards

Inhalation

- Hydroquinone : May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest.

Skin contact

- Hydroquinone : Chronic intensive skin contact may cause dermatitis.

Eye contact

- Hydroquinone : Contact may cause brownish discoloration of conjunctiva and cornea. Repeated or prolonged eye contact may cause photophobia (sensitivity to light). Repeated exposure may cause intolerance of the eyes to light.

SECTION 4. FIRST AID MEASURES

- General advice : Call a physician immediately.
- Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact : Wash immediately with plenty of water and soap. If symptoms persist, seek medical advice.
- Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary.

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Inhalation : Do not induce vomiting.
: Take patient to fresh air if necessary. Consult a physician if necessary.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water. Alcohol-resistant foam. Dry extinguishing powder. Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons : Do not use a solid water stream as it may scatter and spread fire.

Special protective equipment for fire-fighters : Regular fire intervention clothes.

Additional advice : Product is not combustible. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Cleanup personnel must use appropriate personal protective equipment.

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.

Methods for cleaning up : Dike the spill if necessary. If spill occurs, apply a suitable absorbent material and collect into an impervious waste container. Collect the product in a plastic vessel. Carefully collect leftovers.

Additional advice : Observe normal precautions when handling chemicals.

SECTION 7. HANDLING AND STORAGE**Handling**

Advice on protection against fire and explosion : No special protective measures against fire and explosion required.

Advice on safe handling : Prevent product from diffusing.

Storage

Storage conditions : Keep container in a well-ventilated place.

Requirements for storage areas and containers : Keep container tightly closed. Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Exposure Limit Values (US)

Components	CAS-No.	Values	Type	Revision Date	Basis
Hydroquinone	123-31-9	1 mg/m3	TWA	2008	ACGIH OSHA Z1 OSHA Z1A
		2 mg/m3	PEL	06 1993	
		2 mg/m3	TWA	1989	

Exposure Limit Values (CA)

Components	CAS-No.	Values	Type	Revision Date	Basis
Hydroquinone	123-31-9	2 mg/m3	TWA	12 2008	OEL (QUE)
		1 mg/m3	TWA	07 2007	CAD BC OEL
		2 mg/m3	8 HR ACL	05 2009	CAD SK OEL
		4 mg/m3	15 MIN ACL	05 2009	CAD SK OEL
		1 mg/m3	TWA	03 2011	CAD MB OEL

Exposure controls

- Hygiene measures : Observe normal precautions when handling chemicals. Keep away from foodstuffs, drinks and tobacco. Employees should wash their hands and face before eating, drinking, or using tobacco products.
- Respiratory protection : not required under normal use
- Hand protection : Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butylrubber (thickness \geq 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard EN374, for example KCL 898 Butoject (full contact), KCL 890 Vito Ject (splash contact).
Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these properties(eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of types of use are prescribed by the manufacturer.
- Eye protection : Safety goggles. EN 166.
- Body Protection : Safety clothes.
- Personal protective equipment : Observe normal precautions when handling chemicals.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid.

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Colour	:	Colourless to brownish
Odour	:	Slight inherent odour
Vapour pressure	:	23.00 hPa at 20 °C (68 °F)
Density	:	No data available
Relative density	:	1.340 at 20 °C (68 °F)
Water solubility	:	No data available
pH (25 °C, 77 °F)	:	12.6
Melting point/range	:	< 0 °C (< 32 °F)
Boiling point/range	:	> 100 °C (> 212 °F)
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Relative vapour density	:	aqueous solution
Evaporation rate	:	No data available
Odor threshold	:	No data available
Autoignition temperature	:	Not applicable
Flash point	:	No data available
VOC content	:	0 % 0 g/l VOC content excluding water

SECTION 10. STABILITY AND REACTIVITY

Stability	:	The product is stable under normal conditions of storage and use.
Hazardous reactions	:	The product is stable under normal conditions of storage and use.
Hazardous decomposition products	:	Hazardous decomposition products No specified dangerous decomposition products are known.
Conditions to avoid	:	Avoid contact with strong acids and strong oxidizing agents (e.g. sodiumhypochlorite). Remove all chemicals and rinse the processing tanks thoroughly with water before using any cleansing products.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute oral toxicity**

- Hydroquinone : LD50 rat 320 mg/kg
- 2-Methylaminoethanol : LD50 rat 1,391 mg/kg

Acute inhalation toxicity

- Hydroquinone :
It was demonstrated that during intended and foreseen applications, no respirable aerosol is formed. Inhalation of airborne droplets may cause irritation of the respiratory tract.

Acute dermal toxicity

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- Hydroquinone : LD50 cat 5,970 mg/kg
Based on available data, the classification criteria are not met.
 - 2-Methylaminoethanol : LD50 rabbit 1,006 mg/kg
- Acute toxicity (other route)**
- Hydroquinone :
No data available
- Skin irritation**
- Hydroquinone : No skin irritation
No skin irritation
Tested according to Annex V of Directive 67/548/EEC.
According to the classification criteria of the European Union, the product is not considered as being a skin irritant.
- Eye irritation**
- Hydroquinone : Risk of serious damage to eyes.
Eye irritation
Tested according to Annex V of Directive 67/548/EEC.
- Sensitization**
- Hydroquinone : May cause sensitisation by skin contact.
Tested according to Annex V of Directive 67/548/EEC.
- Repeated dose toxicity**
- Hydroquinone : No data available
- Carcinogenicity**
- Hydroquinone : Formation of benign kidney tumors occurred only after nephropathy developed and only in one strain of male rat. Additional effects have been reported. Although an increase in leukemia was reported in the female F-344 rat, this result was not reproduced in a subsequent study. There was no evidence of cancer in male mice following chronic oral administration. Increases in primarily benign tumors were noted in female mice, although this finding was not reproduced in a subsequent study. No tumors were reported in mice following long-term dermal application.
- Toxicity to reproduction**
- Hydroquinone : Has not caused reproductive effects in male or female animals when administered orally at dose levels not causing systemic toxicity
- Mutagenicity**
- Hydroquinone : Studies using the 'Ames' test were generally negative. There is some evidence for mutagenicity from studies in animals, in isolated cells taken from animals and plants, and in other microorganisms.

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Teratogenicity

- Hydroquinone : Has not caused birth defects when administered orally at dose levels not causing systemic toxicity in the mother.

Chronic toxicity

- Hydroquinone : Adverse kidney effects have been observed primarily in one strain of male rat (F-344) following chronic administration of oral doses. Nephropathy did not occur in two other strains of rats, mice, or dogs.

Other information

- Hydroquinone : Components of the product create formation of methaemoglobin. Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components. Blood disorder may occur after ingestion. Concentrations substantially above the admissible concentration at the workplace may cause damage of liver and kidney and changes in the blood picture. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Concentration above the OEL may cause irritation of eyes and mucous membranes.

SECTION 12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)****Biodegradation**

- Hydroquinone : OECD 301D Assessment of biological degradability > 80 % after 28 d
According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Physico-chemical removability

- Hydroquinone : The product can be eliminated from water by abiotic processes, e.g. adsorption on activated sludge.

Bioaccumulation

- Hydroquinone : Bioaccumulation is unlikely. Accumulation in aquatic organisms is unlikely. Accumulation in terrestrial organisms is unlikely.

Ecotoxicity effects**Toxicity to fish**

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- Hydroquinone : Species: Brachidanio rerio (zebra fish)
LC50: 0.11 to 0.64 mg/l/ 96 h
- 2-Methylaminoethanol : Species: Brachidanio rerio (zebra fish)
LC50: > 100 mg/l/ 96 h

Toxicity to daphnia

- Hydroquinone : Species: Daphnia magna (water flea)
EC50: 0.3 mg/l/ 48 h
- 2-Methylaminoethanol : Species: Daphnia magna (water flea)
EC50: 33 mg/l/ 48 h

Toxicity to algae

- Hydroquinone : Species: Selenastrum capricornutum (algae)
EC50: 0.3 mg/l/ 72 h
- 2-Methylaminoethanol : Species: Desmodesmus subspicatus (algae)
EC50: 18.4 mg/l/ 72 h

Toxicity to bacteria

- Hydroquinone : No data available
- 2-Methylaminoethanol : Species: Pseudomonas putida (bacteria)
EC10: 11,500 mg/l/ 17 h

SECTION 13. DISPOSAL CONSIDERATIONS**Waste disposal methods**

May be discharged to drain if local regulations permit.

SECTION 14. TRANSPORT INFORMATION**CFR_ROAD**

- UN-No : 3082
- Proper shipping name : Environmentally hazardous substances, liquid, n.o.s.
(Hydroquinone)
- Class : 9
- Packing group : III
- Labelling No. : 9

CFR_RAIL

- UN-No : 3082
- Proper shipping name : Environmentally hazardous substances, liquid, n.o.s.
(Hydroquinone)
- Class : 9
- Packing group : III
- Labelling No. : 9

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CFR_INWTR

UN-No : 3082
Proper shipping name : Environmentally hazardous substances, liquid, n.o.s.
(Hydroquinone)
Class : 9
Packing group : III
Labelling No. : 9

TDG_ROAD

UN-No : 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Hydroquinone)
Class : 9
Packing group : III
Labelling No. : 9

TDG_RAIL

UN-No : 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Hydroquinone)
Class : 9
Packing group : III
Labelling No. : 9

TDG_INWTR

UN-No : 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Hydroquinone)
Class : 9
Packing group : III
Labelling No. : 9

IMO / IMDG

UN-No : 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Hydroquinone)
Class : 9
Packing group : III
Labelling No. : 9
EmS : F-A, S-F
Marine pollutant : P

ICAO / IATA cargo aircraft only

UN-No : 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Hydroquinone)
Class : 9
Packing group : III

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Labelling No. : 9MI
 Packing instruction : 964

ICAO / IATA passenger and cargo aircraft

UN-No : 3082
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
 (Hydroquinone)
 Class : 9
 Packing group : III
 Labelling No. : 9MI
 Packing instruction : 964

SECTION 15. REGULATORY INFORMATION**US. Toxic Substances Control Act (TSCA)**

- Hydroquinone : y (positive listing)
- 2-Methylaminoethanol : y (positive listing)

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

- Hydroquinone : Threshold planning quantity, lower value: 500 lbs
- : Threshold planning quantity, upper value: 10,000 lbs

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- Hydroquinone : De minimis concentration: 1.0 %
- : Reportable threshold: 10,000 lbs
- : Reportable threshold: 25,000 lbs

US. EPA CERCLA Hazardous Substances (40 CFR 302)

- Hydroquinone : Reportable quantity: 100 lbs

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

- | | <u>CAS-No.</u> | <u>Concentration [%]</u> |
|------------------------|----------------|--------------------------|
| • Hydroquinone | 123-31-9 | >= 5.0 - <= 10.0 |
| • 2-Methylaminoethanol | 109-83-1 | >= 1.0 - <= 5.0 |

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

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	<u>CAS-No.</u>	<u>Concentration [%]</u>
• Hydroquinone	123-31-9	>= 5.0 - <= 10.0
• 2-Methylaminoethanol	109-83-1	>= 1.0 - <= 5.0

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

	<u>CAS-No.</u>	<u>Concentration [%]</u>
• Hydroquinone	123-31-9	>= 5.0 - <= 10.0

**US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists :
See Section 2.****Canadian Environmental Protection Act (CEPA)**

- Hydroquinone : DSL : y (positive listing)
- 2-Methylaminoethanol : DSL : y (positive listing)

SECTION 16. OTHER INFORMATION