

MATERIAL SAFETY DATA SHEET

SECTION 1 - General Information

Product Name: HIC-ES, ECO-Plus Automatic X-Ray Developers, Working Strength	Catalog #: 42-774,
Product Use: Photographic developer	HMIS SCALE Health 1 Flammability 0
Supplier: Shimadzu Medical Systems Oceania	Reactivity 0 PPE C
Address: Unit E, 10-16 South Street Rydalmere, NSW 2116	
Phone No.: 02-9898-2444	Emergency Tel.: 1800-812-774 or 0419-468-514

SECTION 2 - Product & Hazardous Ingredients Information

HAZARDOUS INGREDIENTS	CAS No.	W?W %	PEL	LD50	LC50
Water	7732-18-5	85-90	not listed	42.6gm/kg	N/A
Sodium metabisulfite	7681-57-4	< 3	NOIOSH TWA 5 mg/m3	2000 mg/kg	N/A
Hydroquinone	123-31-9	< 2	OSHA TWA 2 mg/m3	320 mg/kg	N/A
Potassium hydroxide	1310-58-3	< 2	NIOSH © 2mg/m3	365 mg/kg	N/A

SECTION 3 - Hazards Identification

EFFECTS OF ACUTE EXPOSURE TO PRODUCT

Harmful if swallowed.

EFFECTS OF CRONIC EXPOSURE TO PRODUCT

None known.

SECTION 4 - First Aid Measures

SKIN CONTACT:

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

EYE CONTACT:

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

INGESTION:

DO NOT induce vomiting. Seek medical attention immediately.

INHALATION:

If inhaled, remove to fresh air.

SECTION 5 - Fire Fighting Measures

Flamability YES NO IF YES UNDER WHAT CONDITIONS

MEANS OF EXTINGUISHING

As needed to extinguish adjacent fire source.

FLASH POINT (C/F)

Upper limit % by volume

Lower limit % by volume

Autoignition Temperature (C/F)

Not appropriate

Not appropriate

Not appropriate

Not appropriate

HAZARDOUS COMBUSTION PRODUCTS

Explosion Data Sensitivity to impact

Sensitivity to Static Discharge

"See Hazardous Decomposition Products"

not susceptible

not susceptible

SECTION 6 - Accidental Release

Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

SECTION 7 - Handling and Storage

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes.

Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

SECTION 8 - Exposure Control			Catalog #: 42-774,
VENTILLATION	Good general ventilation		44-504ES
SKIN	Latex or nitrile	RESPIRATOR	Not normally required 44-506
OTHER	Eye wash station	EYE:	Splash goggles

SECTION 9 - Physical & Chemical Properties

PHYSICAL STATE	ODOR & APPEARANCE		ODOR THRESHOLD
Liquid	Light yellow, odorless solution.		Not available
VAPOUR PRESSURE (mm-Hg)	Vapour Density (Air=1)	Evaporation Rate (Water=1)	Boiling Point
<17 mm Hg	0.6 mm Hg	Not Available	> 212 F
pH	Specific Gravity	Solubility in Water	Freeze Point
10.5	1.08	Complete	< 32 F
			Coef H2O/oil
			N/A
			% Volatile (by volume)
			not applicable

SECTION 10 - Stability & Reactivity Data

Chemical Stability	IF NO, UNDER WHAT CONDITIONS
YES <u>X</u> NO	
INCOMPATIBLE WITH OTHER SUBSTANCES	IF YES, WHICH ONES?
YES <u>X</u> NO	Strong oxidizing agent and strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS	
	sulfur dioxide, only under extreme conditions.

SECTION 11 - Toxicological Information

EXPOSURE LIMITS	Irritancy of Product	Sensitation to Product	CARCINOGENICITY
None known	Skin: Irritant	None known	Not listed by IARC, OSHA, or ACGIH
TERATOGENICITY	REPRODUCTIVE TOXIN	MUTAGENICITY	SYNERGISTIC PRODUCTS
None Known	Not Known	Not Known	Not Known

SECTION 12 - Ecological Information

No Data Available

SECTION 13 - Disposal Considerations

Dispose of this product in accordance with federal, state and/or local laws.

SECTION 14 - Transportation Information

Not regulated for transportation.

SECTION 15 - Regulatory Information

SARA: Reportable quantity (RQ) for Hydroquinone 5000 lb, Potassium hydroxide 1000 lb
 SARA Section 304, CERCLA Hazardous components - (None)
 SARA Section 302,304,313 Hazardous components (None)
 Not a controlled product under Canadian WHMIS regulations.

SECTION 16 - Other Information

The information contained in this MSDS is furnished without warranty of any kind. The user should consider this data a supplement to other data gathered and must make an independent determination of suitability from this and other sources to assure proper use and disposal of this material and the health and safety of employees and customers.

MATERIAL SAFETY DATA SHEET

SECTION 1 - General Information

Product Name: HIC-ES, ECO-Plus Automatic X-Ray Developers, Part 1			Catalog #: 42-774,
Product Use: Photographic developer	HMIS SCALE Health 1	Flamability 0	44-504ES
Supplier: Shimadzu Medical Systems Oceania	Reactivity 0	PPE C	44-506
Address: Unit E, 10-16 South Street Rydalmere, NSW 2116			
Phone No.: 02-9898-2444	Emergency Tel.:	1800-812-774 or 0419-468-514	

SECTION 2 - Product & Hazardous Ingredients Information

HAZARDOUS INGREDIENTS	CAS No.	W?W%	PEL	LD50	LC50
Water	7732-18-5	60-70	not listed	42.6gm/kg	N/A
Sodium metabisulfite	7681-57-4	5-10	NOIOSH TWA 5 mg/m3	2000 mg/kg	N/A
Hydroquinone	123-31-9	5-10	OSHA TWA 2 mg/m3	320 mg/kg	N/A
Potassium hydroxide	1310-58-3	2-6	NIOSH @ 2mg/m3	365 mg/kg	N/A
Sodium metaborates	12179-04-3	2-6	NIOSH TWA 1mg/m3	N/A	N/A

SECTION 3 - Hazards Identification

EFFECTS OF ACUTE EXPOSURE TO PRODUCT

Harmful if swallowed.
May cause mild skin irritation and or allergic reaction.

EFFECTS OF CRONIC EXPOSURE TO PRODUCT

None known.

SECTION 4 - First Aid Measures

SKIN CONTACT:

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

EYE CONTACT:

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

INGESTION:

DO NOT induce vomiting. Seek medical attention immediately.

INHALATION:

If inhaled, remove to fresh air.

SECTION 5 - Fire Fighting Measures

Flamability YES NO IF YES UNDER WHAT CONDITIONS

MEANS OF EXTINGUISHING

As needed to extinguish adjacent fire source.

<u>FLASH POINT (C/F)</u>	<u>Upper limit % by volume</u>	<u>Lower limit % by volume</u>	<u>Autoignition Temperature (C/F)</u>
Not appropriate	Not appropriate	Not appropriate	Not appropriate

HAZARDOUS COMBUSTION PRODUCTS

<u>Explosion Data</u>	<u>Sensitivity to impact</u>	<u>Sensitivity to Static Discharge</u>
"See Hazardous Decomposition Products"	not susceptible	not susceptible

SECTION 6 - Accidental Release

Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

SECTION 7 - Handling and Storage

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes.

Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

SECTION 8 - Exposure Control

VENTILLATION Good general ventilation
 SKIN Latex or nitrile RESPIRATOR Not normally required
 OTHER Eye wash station EYE: Splash goggles

SECTION 9 - Physical & Chemical Properties

PHYSICAL STATE Liquid	ODOR & APPEARANCE Light yellow, odorless solution.		ODOR THRESHOLD Not available
VAPOUR PRESSURE (mm-Hg) <17 mm Hg	Vapour Density (Air=1) 0.6 mm Hg	Evaporation Rate (Water=1) Not Available	Boiling Point > 212 F
pH 10.5	Specific Gravity 1.27	Solubility in Water Complete	Freeze Point < 32 F
			Coef H2O/oil N/A
			% Volatile (by volume) 80-90% as water

SECTION 10 - Stability & Reactivity Data

Chemical Stability IF NO, UNDER WHAT CONDITIONS
 YES X NO
 INCOMPATIBLE WITH OTHER SUBSTANCES IF YES, WHICH ONES?
 YES X NO Strong oxidizing agent and strong acids.
 HAZARDOUS DECOMPOSITION PRODUCTS

SECTION 11 - Toxicological Information

EXPOSURE LIMITS None known	Irritancy of Product Skin: Irritant	Sensitisation to Product None known	CARCINOGENICITY Not listed by IARC, OSHA, or ACGIH
TERATOGENICITY None Known	REPRODUCTIVE TOXIN Not Known	MUTAGENICITY Not Known	SYNERGISTIC PRODUCTS Not Known

SECTION 12 - Ecological Information

No Data Available

SECTION 13 - Disposal Considerations

Dispose of this product in accordance with federal, state and/or local laws.

SECTION 14 - Transportation Information

Not regulated for transportation.

SECTION 15 - Regulatory Information

SARA: Reportable quantity (RQ) for Hydroquinone 5000 lb, Potassium hydroxide 1000 lb
 SARA Section 304, CERCLA Hazardous components - (None)
 SARA Section 302,304,313 Hazardous components (None)
 Not a controlled product under Canadian WHMIS regulations.

SECTION 16 - Other Information

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MATERIAL SAFETY DATA SHEET

SECTION 1 - General Information

Product Name: HIC-ES, ECO-Plus Automatic X-Ray Developers, Part 2		Catalog #: 42-774,
Product Use: Photographic developer	HMIS SCALE Health 1	44-504ES
Supplier: Shimadzu Medical Systems Oceania	Reactivity 0 PPE C	44-506
Address: Unit E, 10-16 South Street Rydalmere, NSW 2116		
Phone No.: 02-9898-2444	Emergency Tel.: 1800-812-774 or 0419-468-514	

SECTION 2 - Product & Hazardous Ingredients Information

HAZARDOUS INGREDIENTS	CAS No.	W?W %	PEL	LD50	LC50
Water	7732-18-5	60-75	not listed	42.6gm/kg	N/A
Gluteraldehyde bis-bisulfite	7420-89-5	20-40	not listed	N/A	N/A

SECTION 3 - Hazards Identification

EFFECTS OF ACUTE EXPOSURE TO PRODUCT
 Harmful if swallowed.
 May cause mild skin irritation and or allergic reaction.

EFFECTS OF CRONIC EXPOSURE TO PRODUCT
 None known.

SECTION 4 - First Aid Measures

SKIN CONTACT:

Wash exposed skin thoroughly with soap and water. If irritation persists seek medical advice.

EYE CONTACT:

Flush eyes with water for 15 minutes. Seek medical advice if symptoms persist.

INGESTION:

DO NOT induce vomiting. Seek medical attention immediately.

INHALATION:

If inhaled, remove to fresh air.

SECTION 5 - Fire Fighting Measures

Flamability YES NO IF YES UNDER WHAT CONDITIONS

MEANS OF EXTINGUISHING

As needed to extinguish adjacent fire source.

FLASH POINT (C/F)

Upper limit % by volume

Lower limit % by volume

Autoignition Temperature (C/F)

Not appropriate

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HAZARDOUS COMBUSTION PRODUCTS

Explosion Data Sensitivity to impact

Sensitivity to Static Discharge

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Flush to sewer with plenty of water, if permitted. If not, soak up with dry absorbent material. Consult with governmental regulatory agencies for appropriate disposal of this material. Wear appropriate protective equipment.

SECTION 7 - Handling and Storage

Read and follow the label, material safety data sheet, and instructions before using. Avoid any contact with skin and eyes. Keep container tightly closed. Avoid incompatible substances. Wash thoroughly after handling this product.

SECTION 8 - Exposure Control		Catalog #:
VENTILLATION	Good general ventilation	42-774, 44-504ES
SKIN	Latex or nitrile	44-506
OTHER	Eye wash station	
	RESPIRATOR: Not normally required	
	EYE: Splash goggles	

SECTION 9 - Physical & Chemical Properties				
PHYSICAL STATE	ODOR & APPEARANCE			ODOR THRESHOLD
Liquid	Clear, light yello liquid			Not available
VAPOUR PRESSURE (mm-Hg)	Vapour Density (Air=1)	Evaporation Rate (Water=1)	Boiling Point	Freeze Point
<17 mm Hg	0.6 mm Hg	Not Available	> 212 F	< 32 F
pH	Specific Gravity	Solubility in Water	Coef H2O/oil	% Volatile (by volume)
2.9	1.075	Complete	N/A	80-90% as water

SECTION 10 - Stability & Reactivity Data

Chemical Stability	IF NO, UNDER WHAT CONDITIONS
YES <u>X</u> NO	
INCOMPATIBLE WITH OTHER SUBSTANCES	IF YES, WHICH ONES?
YES <u>X</u> NO	

HAZARDOUS DECOMPOSITION PRODUCTS
no hazardous decomposition products.

SECTION 11 - Toxicological In formation

EXPOSURE LIMITS	Irritancy of Product	Sensitation to Product	CARCINOGENICITY
None known	Skin: Irritant	None known	Not listed by IARC, OSHA, or ACGIH
TERATOGENICITY	REPRODUCTIVE TOXIN	MUTAGENICITY	SYNERGISTIC PRODUCTS
None Known	Not Known	Not Known	Not Known

SECTION 12 - Ecological Information

No Data Available

SECTION 13 - Disposal Considerations

Dispose of this product in accordance with federal, state and/or local laws.

SECTION 14 - Transportation Information

Not regulated for transportation.

SECTION 15 - Regulatory Information

SARA Section 304, CERCLA Hazardous components - (None)
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