

Material Safety Data Sheet



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1. Identification of the substance/preparation and of the company/undertaking

Product name: KODAK SELECTOL - Soft Developer, Working Solution

Product code: 1464627 - Working Solution

Supplier: EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York, 14650

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For other information or to request an MSDS, call (800) 242-2424.

Synonyms: None.

Product Use: photographic processing chemical, For industrial use only.

2. Hazards identification

EXPECTED TO BE A LOW HAZARD FOR RECOMMENDED HANDLING

NFPA Hazard Ratings: Health - 1, Flammability - 0, Instability - 0

NOTE: NFPA 704 (2007) hazard indexes involves data review and interpretation that may vary among companies. It is intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
100	Non Hazardous Components (not applicable)

4. First aid measures

Inhalation: If inhaled, move to fresh air. Get medical attention if symptoms occur.

Eyes: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur.

Skin: Wash off with soap and water. Get medical attention if symptoms occur.

Ingestion: Get medical attention if symptoms occur.

5. Fire-fighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Fire-Fighting Procedures: None (noncombustible)

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Hazardous Combustion Products: None (noncombustible)

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Methods for cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

Personal precautions: Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: No special technical protective measures required.

Storage: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls / personal protection

Occupational exposure controls: Not established

Ventilation: Good general ventilation should be used. Ventilation should be sufficient so that applicable occupational exposure limits are not exceeded. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances.

Respiratory protection: None should be needed.

Eye protection: Wear safety glasses with side shields (or goggles).

Skin and body protection: For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Recommended Decontamination Facilities: Safety shower, eye wash, washing facilities as appropriate to condition of use.

9. Physical and Chemical Properties

Physical form: liquid

Colour: light yellow

Odour: odourless

Specific gravity: No data available

Vapour pressure: No data available

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Vapour density: No data available

Volatile fraction by weight: > 99 %

Boiling point/range: > 100.0 °C (> 212.0 °F) (estimated)

Melting point/range: not applicable

Water solubility: complete

pH: No data available

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: None with common materials and contaminants with which the material may reasonably come into contact.

Hazardous decomposition products: None under normal conditions of use.

Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information

Effects of Exposure

Inhalation: Expected to be a low hazard for recommended handling.

Eyes: No specific hazard known. May cause transient irritation.

Skin: Expected to be a low hazard for recommended handling.

Ingestion: Expected to be a low hazard for recommended handling.

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Toxicity to fish (LC50): > 100 mg/l

Toxicity to daphnia (EC50): > 100 mg/l

Toxicity to algae (EC50): > 100 mg/l

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Toxicity to other organisms (EC50): > 100 mg/l

Persistence and degradability: Readily biodegradable

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: www.kodak.com/go/ship.

15. Regulatory information

Notification status

Regulatory List	Notification status	Other information	Not listed
EINECS	y (positive listing)	-	
TSCA	y (positive listing)	On TSCA Inventory	
AICS	y (positive listing)	-	
DSL	y (positive listing)	All components of this product are on the Canadian DSL list.	
ENCS (JP)	y (positive listing)	-	
KECI (KR)	y (positive listing)	-	
PICCS (PH)	y (positive listing)	-	
INV (CN)	y (positive listing)	-	

A N (Negative listing) indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Kodak.

Other regulations

American Conference of Governmental Industrial Hygienists (ACGIH):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
U.S. National Toxicology Program (NTP):	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated

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	carcinogen by NTP.
U.S. Occupational Safety and Health Administration (OSHA):	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
U.S. California Prop. 65:	none
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323):	Water
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000):	No components are subject to Massachusetts Right To Know Act.
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5):	Water
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:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR355, Appendix A):	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

US/Canadian Label Statements:

EXPECTED TO BE A LOW HAZARD FOR RECOMMENDED HANDLING

Avoid breathing mist or vapour.
Avoid contact with eyes, skin, and clothing.
Use only with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If inhaled, move to fresh air. Wash off with soap and water. Get medical attention if symptoms occur.

Keep out of reach of children.

Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

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IN CASE OF FIRE: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

IN CASE OF SPILL: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment. The information relating to the working solution is for guidance purposes only, and is based on correct mixing and use of the product according to instructions.

R-1, S-1, F-0, C-0

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1. Identification of the substance/preparation and of the company/undertaking

Product name: KODAK SELECTOL - Soft Developer

Product code: 1464627

Supplier: EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York, 14650

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For other information or to request an MSDS, call (800) 242-2424.

Synonyms: None.

Product Use: Professional photographic processing chemical, For industrial use only.

2. Hazards identification

CONTAINS: Sodium carbonate (497-19-8), Sodium sulphite (7757-83-7), Sodium hexametaphosphate (10124-56-8), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

WARNING!

MAY LIBERATE SULFUR DIOXIDE

HARMFUL IF INHALED OR SWALLOWED

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

DUST, MIST OR VAPOUR IRRITATING TO THE EYES AND RESPIRATORY TRACT

MAY CAUSE CYANOSIS BASED ON ANIMAL DATA

MAY CAUSE BLOOD DISORDERS BASED ON ANIMAL DATA

MAY CAUSE KIDNEY DAMAGE BASED ON ANIMAL DATA

NFPA Hazard Ratings: Health - 3, Flammability - 0, Instability - 0

NOTE: NFPA 704 (2007) hazard indexes involves data review and interpretation that may vary among companies. It is intended only for rapid, general identification of the magnitude of the potential hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
40 - 45	Sodium carbonate (497-19-8)
40 - 45	Sodium sulphite (7757-83-7)
5 - 10	Sodium hexametaphosphate (10124-56-8)
5 - 10	Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

4. First aid measures

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Inhalation: If symptomatic, move to fresh air. Get medical attention.

Eyes: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

Ingestion: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Notes to physician:

Treatment: Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value.

5. Fire-fighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products section).

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Methods for cleaning up: Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

Personal precautions: Do not breathe dust at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: No special technical protective measures required.

Storage: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

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8. Exposure controls / personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sulphur dioxide	ACGIH	time weighted average	2 ppm
	ACGIH	Short term exposure limit	5 ppm
	OSHA Z1	Permissible exposure limit	5 ppm 13 mg/m3

Ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: Acid gas. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

Eye protection: Wear safety glasses with side shields (or goggles).

Skin and body protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

Recommended Decontamination Facilities: Safety shower, eye wash, washing facilities as appropriate to condition of use.

9. Physical and Chemical Properties

Physical form: solid

Colour: white

Odour: odourless

Specific gravity: > 1

Vapour pressure: negligible

Vapour density: not applicable

Volatile fraction by weight: not applicable

Boiling point/range: not applicable

Melting point/range: not applicable

Water solubility: appreciable

pH: not applicable

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Flash point: not applicable

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Acids. Contact with strong acids liberates sulphur dioxide.

Hazardous decomposition products: nitrogen oxides (NOx), sulphur oxides, Oxides of phosphorus.

Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: Sodium hexametaphosphate. May cause kidney damage based on animal data.

Contains: Bis(4-hydroxy-N-methylanilinium) sulphate. Based on animal data, may cause adverse effects on the following organs/systems: blood, kidney, spleen. Based on animal data this material can produce methemoglobin which, in sufficient concentration, causes cyanosis, a blue-gray discoloration of the skin and lips caused by a reduced ability of the blood to carry oxygen.

Inhalation: May be harmful if inhaled. Airborne dust/mist/vapor irritating. In contact with strong acids or if heated, sulphites may liberate sulphur dioxide gas. Sulphur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

Eyes: Airborne dust/mist/vapor irritating. However, immediate flushing of the eyes with water will minimize any irritative effect. Causes eye irritation.

Skin: May cause allergic skin reaction. Causes skin irritation.

Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

Data for Sodium carbonate (CAS 497-19-8):

Acute Toxicity Data:

- Oral LD50 (rat): 4,090 mg/kg
- Oral LD50 (rat): 1,600 - 3,200 mg/kg
- Skin irritation: slight

Data for Sodium sulphite (CAS 7757-83-7):

Acute Toxicity Data:

- Oral LD50 (rat): > 1,600 mg/kg
- Skin irritation: none

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- Eye irritation: slight; washing palliative

Data for Sodium hexametaphosphate (CAS 10124-56-8):

Acute Toxicity Data:

- Oral LD50 (rat): 6,200 mg/kg
- Oral LD50 (mouse): 4,320 mg/kg

Data for Bis(4-hydroxy-N-methylanilinium) sulphate (CAS 55-55-0):

Acute Toxicity Data:

- Oral LD50 (rat): 237 mg/kg
- Oral LD50 (mouse): 565 mg/kg
- Dermal LD50: > 1,000 mg/kg (highest dose tested)
- Skin irritation: slight
- Skin irritation: slight to moderate (repeated skin application)
- Skin Sensitization: none
- Eye irritation (unwashed eyes): moderate to strong
- Eye irritation (washed eyes): slight

Definitions for the following section(s): LOEL =lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL =no-observed-effect level.

Repeated dose toxicity:

- Oral (11 days): LOEL (Lowest observable effect level); 1.0 % in diet (reduced feed intake, reduced body weight gain, target organ effects: red blood cell)
- Oral (11 days): NOEL; 0.1 % in diet

12. Ecological information

The following properties are ESTIMATED from the components of the preparations.

Potential Toxicity:

Fish LC50:	1 - 10 mg/l
Daphnid EC50:	1 - 10 mg/l
Algal IC50:	10 - 100 mg/l

Waste treatment organisms EC50:	> 100 mg/l
Organics Readily Degradable:	Readily biodegradable
Potential Bioaccumulation:	log Pow < 1
COD (approximate):	115 g/l

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BOD (approximate): 89 g/l

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

Not regulated for all modes of transportation.

For more transportation information, go to: www.kodak.com/go/ship.

15. Regulatory information

U.S. California Prop. 65: none

Carcinogenicity Classification (components present at 0.1% or more):

International Agency for Research on Cancer (IARC): none

American Conference of Governmental Industrial Hygienists (ACGIH): none

U.S. National Toxicology Program (NTP): none

U.S. Occupational Safety and Health Administration (OSHA): none

Chemical(s) subject to the reporting requirements of U.S. Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none

16. Other information

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.

US/Canadian Label Statements:

CONTAINS: Sodium carbonate (497-19-8), Sodium sulphite (7757-83-7), Sodium hexametaphosphate (10124-56-8), Bis(4-hydroxy-N-methylanilinium) sulphate (55-55-0)

WARNING!

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HARMFUL IF INHALED OR SWALLOWED

CAUSES SKIN AND EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

DUST, MIST OR VAPOUR IRRITATING TO THE EYES AND RESPIRATORY TRACT

MAY CAUSE CYANOSIS BASED ON ANIMAL DATA

MAY CAUSE BLOOD DISORDERS BASED ON ANIMAL DATA

MAY CAUSE KIDNEY DAMAGE BASED ON ANIMAL DATA

Do not breathe dust at concentrations greater than the exposure limits.

Avoid contact with eyes, skin, and clothing.

Keep container tightly closed.

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Use only with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If symptomatic, move to fresh air. Get medical attention. Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes. If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Notes to physician: Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value.

Keep out of reach of children.

Do not handle or use until safety precautions in Material Safety Data Sheet (MSDS) have been read and understood.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

IN CASE OF FIRE: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

IN CASE OF SPILL: Shovel into suitable container for disposal. Clean surface thoroughly to remove residual contamination.

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R-2, S-2, F-0, C-0