

Safety Data Sheet

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Kodak alaris

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

Product name: KODAK FLEXICOLOR LU Developer Replenisher LORR, Part A

Product code: 8231672 - Part A

Synonyms: PCD 6652

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: photographic processing chemical (developer/activator). For industrial use only.

Supplier: Kodak Alaris Inc., 2400 Mount Read Boulevard, Rochester, NY 14615

IN EMERGENCY, telephone: 1-800-424-9300 or +1 703-527-3887.

For further information about this product, email EHS-Questions@Kodakalaris.com.

2. Hazards identification

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Hazard class	Hazard category	Route of exposure
Corrosive to metals	Category 1	--
Skin corrosion	Category 2	--
Serious eye damage	Category 1	--
Specific target organ toxicity - single exposure	Category 3	--

GHS-Labeling

Contains:

Potassium carbonate (584-08-7), Sodium metabisulphite (7681-57-4), Pentetic acid, pentasodium salt (140-01-2), Potassium hydroxide (1310-58-3)

Symbol(s):



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Signal word: Danger

Hazard statements: May be corrosive to metals. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

Precautionary statements:

Prevention: Keep only in original container. Wear protective gloves/ eye protection/ face protection. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.

Response: Immediately call a POISON CENTER or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash before reuse. Absorb spillage to prevent material damage.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with resistant liner.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

Other hazards which do not result in classification:

Can decompose at elevated temperatures.
The physical-chemical properties of this material have not been fully investigated.

HMIS III Hazard Ratings: Health - 3, Flammability - 0, Physical Hazard - 1

NFPA Hazard Ratings: Health - 3, Flammability - 0, Instability - 1

NOTE: HMIS III and NFPA 704 (2007) hazard indexes involve data review and interpretation that may vary among companies. They are 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 percent	Components - (CAS-No.)
30 - 35	Potassium carbonate (584-08-7)
1 - 5	Sodium metabisulphite (7681-57-4)

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|-------|--|
| 1 - 5 | Potassium hydroxide (1310-58-3) |
| 1 - 5 | Pentetic acid, pentasodium salt (140-01-2) |

4. First aid measures

Inhalation: If inhaled, remove to fresh air. Get medical attention.

Eyes: Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

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. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: No information available.

Indication of any immediate medical attention and special treatment needed:

Treatment: Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended.

5. Firefighting measures

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

Special hazards arising from the substance or mixture

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

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

Unusual Fire and Explosion Hazards: Fire or high temperatures may cause decomposition.

6. Accidental release measures

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Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Methods and materials for containment and 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.

Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling

Personal precautions: Do not breathe mist or vapour at concentrations greater than the exposure limits. Do not get in eyes and avoid contact with skin and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

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

Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls/personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sodium metabisulphite	ACGIH	Time weighted average	5 mg/m3
Potassium hydroxide		Ceiling Limit Value	2 mg/m3

Appropriate engineering controls: 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.

Individual protection measures, such as personal protective equipment

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

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

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: acid gas If

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respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

9. Physical and chemical properties

Physical form: liquid

Colour: colourless

Odour: odourless

Specific gravity: 1.4012

Vapour pressure: No data available

Vapour density: No data available

Boiling point/boiling range: > 100 °C (> 212.0 °F)

Water solubility: complete

pH: 10.1 - 10.2

Flash point: does not flash

Evaporation rate: No data available

Flammability (Solid; gas): No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

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10. Stability and reactivity

Reactivity: No data available

Chemical stability: Not fully evaluated. Materials containing similar structural groups can decompose if heated.

Possibility of hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid: No data available

Incompatible materials: Strong oxidizing agents, Acids. Contact with strong acids liberates sulphur dioxide.

Hazardous decomposition products: Sulphur oxides, Nitrogen oxides (NO_x)

11. Toxicological information

Effects of Exposure

General advice:

Contains: Sodium metabisulphite. 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.

Inhalation: May cause respiratory irritation. 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: Causes serious eye damage.

Skin: Causes skin irritation. This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Ingestion: Expected to be a low ingestion hazard. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Data for Potassium carbonate (CAS 584-08-7):

Acute Toxicity Data:

Oral LD50 (Rat): > 2,000 mg/kg

- Oral LD50 (Rat): 1,870 mg/kg

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- Inhalation LC50 (Rat): > 4.96 mg/l / 4 hr
- Dermal LD50 (Rat): > 2,000 mg/kg
- Skin irritation: Irritating to skin.
- Eye irritation: moderate

Data for Sodium metabisulphite (CAS 7681-57-4):

Acute Toxicity Data:

Oral LD50 (male Rat): 1,900 mg/kg

- Oral LD50 (female Rat): 1,130 mg/kg
- Oral LD50 (Rat): 1,310 mg/kg
- Dermal LD50: > 1,000 mg/kg
- Skin irritation: moderate (repeated skin application)
- Skin Sensitization: none (May cause sensitisation of susceptible persons by skin contact or by inhalation of dust.)
- Eye irritation: Risk of serious damage to eyes.

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 (14-day, Rat): NOEL; > 1105 mg/kg/day

Data for Potassium hydroxide (CAS 1310-58-3):

Acute Toxicity Data:

Oral LD50 (Rat): 273 mg/kg

- Oral LD50 (Rat): 284 mg/kg
- Skin irritation: Corrosive
- Eye irritation: Corrosive

Carcinogenicity

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.

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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 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.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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):	10 - 100 mg/l

Persistence and degradability: Not readily biodegradable.

Bioaccumulative potential

No data available

Mobility in soil

No information available.

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

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The information below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification. The final classification as it pertains to the product packaging configuration (including labeling, marking, and exceptions) may be obtained via the Dangerous Goods Worksheet which can be found at www.kodak.com/go/ship.

IATA:	UN number:	UN3266
	Proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium Carbonate)
	Class:	8
	Packaging group:	III
IMDG:	UN number:	UN3266
	Proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium Carbonate)
	Class:	8
	Packaging group:	III
US DOT:	UN number:	UN3266
	Proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium Carbonate)
	Class:	8
	Packaging group:	III

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

15. Regulatory information

Notification status

Regulatory List	Notification status
TSCA	Not all listed
DSL	All listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	Not all listed
IECS	All listed
ENCS	Not all listed

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ECI	Not all listed
NZIoC	Not all listed
PICCS	All listed

"Not all listed" 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

U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Potassium hydroxide
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous Substances and Their Threshold Planning Quantities):	No components of this product are subject to the SARA Section 302 (40 CFR 355) reporting requirements.
U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	No components of this product are subject to the SARA Section 313 (40 CFR 372.65) reporting requirements.
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Sodium metabisulphite , Potassium hydroxide
U.S. - California - 8 CCR Section 5200-5220 - Specifically Regulated Carcinogens:	No components found on the California Specifically Regulated Carcinogens List.
U.S. - California - 8 CCR Section 5203 Carcinogens:	No components found on the California Section 5203 Carcinogens List.
U.S. - California - 8 CCR Section 5209 Carcinogens:	No components found on the California Section 5209 Carcinogens List.
U.S. - Massachusetts - General Law Chapter 111F (MGL c 111F) - Hazardous Substances Disclosure by Employers (a.k.a. Right to Know Law):	Sodium metabisulphite , Potassium hydroxide
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Sodium metabisulphite , Potassium hydroxide
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Sodium metabisulphite , Potassium hydroxide
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Potassium carbonate , Sodium metabisulphite , Potassium hydroxide , Sodium hydroxide

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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:

KODAK FLEXICOLOR LU Developer Replenisher LORR, Part A

Contains:

Potassium carbonate (584-08-7), Sodium metabisulphite (7681-57-4), Pentetic acid, pentasodium salt (140-01-2), Potassium hydroxide (1310-58-3)

Symbol(s):



Signal word: Danger

Hazard statements: May be corrosive to metals. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.

Precautionary statements:

Prevention: Keep only in original container. Wear protective gloves/ eye protection/ face protection. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.

Response: Immediately call a POISON CENTER or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash before reuse. Absorb spillage to prevent material damage.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with resistant liner.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulation.

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FIRST AID: If inhaled, remove to fresh air. Get medical attention. Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility. 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. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. **Note to Physicians:** Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended. 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:** 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-2, S-3, F-0, C-1T