

Material Safety Data Sheet

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

Product name: KODAK EKTACOLOR RA Bleach-Fix and Replenisher, Part B

Product code: 20312577 - Part B

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

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

For further information about this product, call (800) 242-2424.

Synonyms: PCD 5777

Product Use: photographic processing chemical (bleach/bleach fixer), For industrial use only.

2. Hazards identification

CONTAINS: Ammonium ferric ethylenediaminetetraacetic acid (21265-50-9), Acetic acid (64-19-7)

EXPECTED TO BE A LOW HAZARD FOR RECOMMENDED HANDLING

HMIS III Hazard Ratings: Health - 1, Flammability - 1, Reactivity (Stability) - 0

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

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.)
20 - 25	Ammonium ferric ethylenediaminetetraacetic acid (21265-50-9)
1 - 5	Acetic acid (64-19-7)

4. First aid measures

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

Eyes: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lens, if worn. 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.

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5. Fire-fighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Hazardous Combustion Products: Carbon oxides, nitrogen oxides (NOx), (see also Hazardous Decomposition Products sections.)

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

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 at concentrations greater than the exposure limits. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials.

Storage: 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
Ammonium ferric ethylenediaminetetra acetic acid	ACGIH	time weighted average	1 mg/m3
Acetic acid		time weighted average	<i>Expressed as Fe</i> 10 ppm
		Short term exposure limit	15 ppm
	OSHA	time weighted average	10 ppm 25 mg/m3

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. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face organic vapour cartridge. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

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

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

9. Physical and chemical properties

Physical form: liquid

Colour: reddish-brown

Odour: slight ammonia

Specific gravity: 1.10

Vapour pressure (at 20.0 °C (68.0 °F)) : 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Volatile fraction by weight: 70 - 75 %

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

Water solubility: complete

pH: 5.6

Flash point: does not flash

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Strong bases, sodium hypochlorite (bleach), Oxidizing agents, Metals. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong bases may liberate ammonia.

Hazardous decomposition products: Carbon oxides, Ammonia, chloramine, nitrogen oxides (NOx)

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice:

Contains: Ammonium ferric ethylenediaminetetraacetic acid. This compound can chelate metals and may alter calcium and other cation balances.

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Contains: Acetic acid. Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. Extremely high airborne concentrations are not generated during normal conditions of use but may occur following a spill. The potential to generate extremely high airborne concentrations in a spill situation depends upon physical factors such as the concentration of the solution, the volume of the spill, the surface area of the spill, the size of the room where the spill occurred, and the ventilation rate in the room.

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 ingestion hazard.

Data for Acetic acid (CAS 64-19-7):

Acute Toxicity Data:

Oral LD50 (rat): 3,310 - 3,530 mg/kg

- Inhalation LC50: 5620 ppm / 1.00 hr
- Inhalation LC50 (rat): 11.4 mg/l 4641 ppm / 4 hr
- Dermal LD50: 1,060 mg/kg
- Skin irritation: severe
- Eye irritation (washed eyes): severe
- Eye irritation (unwashed eyes): severe

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

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

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the

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date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

IATA:	UN number:	UN3265
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid)
	Class:	8
	Packaging group:	III
IMDG:	UN number:	UN3265
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid)
	Class:	8
	Packaging group:	III
US DOT:	UN number:	UN3265
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Acetic acid)
	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	All listed
DSL	Not all listed
NDSL	Listed
EINECS	All listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	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

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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 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.
U.S. - CERCLA/SARA (40 CFR § 302.4 Designation of hazardous substances):	Acetic acid
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):	Ammonium ferric ethylenediaminetetraacetic acid
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Ammonium ferric ethylenediaminetetraacetic acid, Acetic acid
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):	Acetic acid
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Ammonium ferric ethylenediaminetetraacetic acid,

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	Acetic acid
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Acetic acid
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapters 301-323):	Ammonium ferric ethylenediaminetetraacetic acid, Acetic acid, Water
U.S. - Rhode Island - Title 28 Labor and Labor Relations (Chapters 28-21 Hazardous Substance Right-to-Know Act):	Ammonium ferric ethylenediaminetetraacetic acid, Acetic acid

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 EKTACOLOR RA Bleach-Fix and Replenisher, Part B
CONTAINS: Ammonium ferric ethylenediaminetetraacetic acid (21265-50-9), Acetic acid (64-19-7).
EXPECTED TO BE A LOW HAZARD FOR RECOMMENDED HANDLING.

Avoid prolonged or repeated breathing of mist or vapour. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. **FIRST AID:** If inhaled, remove to fresh air. Get medical attention if symptoms occur. Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lens, if worn. Get medical attention if symptoms occur. Wash off with soap and water. Get medical attention if symptoms occur. 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. **IN CASE OF FIRE:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. **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. Additional Components Include: Water (7732-18-5), Glycine, N,N'-1,2-ethanediylbis{ N-(carboxymethyl)-, triammonium salt (15934-01-7).

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-1, C-0