

Material Safety Data Sheet

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

Product name: KODAK Rapid Fixer, Part B

Product code: 1733013 - 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 other information or to request an MSDS, call (800) 242-2424.

Synonyms: PCD F1720

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

2. Hazards identification

CONTAINS: Sulphuric acid (7664-93-9), Aluminium sulphate (10043-01-3)

DANGER!
POISON
MAY BE FATAL OR HARMFUL IF SWALLOWED
CAUSES SKIN AND EYE IRRITATION

HMIS III Hazard Ratings: Health - 2, Flammability - 0, Reactivity (Stability) - 0

NFPA Hazard Ratings: Health - 2, Flammability - 0, 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 %	Components - (CAS-No.)
15 - 20	Aluminium sulphate (10043-01-3)
10 - 15	Sulphuric acid (7664-93-9)

4. First aid measures

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

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

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

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

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

Chemical Name	Regulatory List	Value Type	Value
Aluminium sulphate	ACGIH	time weighted average <i>Expressed as Al</i>	2 mg/m ³
	OSHA Z1A	time weighted average <i>Expressed as Al</i>	2 mg/m ³
Sulphuric acid	OSHA Z1	Permissible exposure limit	1 mg/m ³
	ACGIH	time weighted average <i>Form of exposure: Thoracic fraction.</i>	0.2 mg/m ³

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.

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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 cartridge respirator with acid gas cartridge and N95 filter.

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).

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

9. Physical and chemical properties

Physical form: liquid

Colour: colourless

Odour: slight sulphur

Specific gravity: 1.30

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: > 100.0 °C (212.0 °F)

Water solubility: complete

pH: 1

Flash point: does not flash

Flammability Limits: Not specified

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Bases.

Hazardous decomposition products: Sulphur oxides.

Hazardous Polymerization: Hazardous polymerisation does not occur.

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11. Toxicological information

Effects of Exposure

General advice:

Contains: Aluminium sulphate. Ingestion may cause nausea, vomiting, abdominal pains, and diarrhea.

Contains: Sulphuric acid. International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic mists or vapours containing sulfuric acid is carcinogenic to humans. 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. The following exposure effects are based on pH of the solution, concentration of the base, and a review of the literature.

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

Eyes: Airborne dust/mist/vapor irritating.

Skin: Causes skin irritation.

Ingestion: May be fatal or harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

Acute Toxicity Data:

- Oral LD50 (rat): 0.5 - 5.0 g/kg
- Skin irritation: moderate
- Skin Sensitization: negative
- Eye irritation: slight

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):	10 - 100 mg/l
Toxicity to algae (IC50):	1 - 10 mg/l
Toxicity to other organisms (EC50):	> 100 mg/l (sludge)

Persistence and degradability: Not applicable

Chemical Oxygen Demand (COD): ca. 0 g/l

Biochemical Oxygen Demand (BOD): ca. 0 g/l

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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 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:	UN3264
	Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid, aluminum sulphate)
	Class:	8
	Packaging group:	III
IMDG:	UN Number:	UN3264
	Proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, aluminum sulphate)
	Class:	8
	Packaging group:	III
US DOT:	UN Number:	UN3264
	Proper shipping name:	Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid, aluminum sulphate)
	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
EINECS	y (positive listing)
TSCA	y (positive listing)
AICS	y (positive listing)
DSL	y (positive listing)
ENCS (JP)	y (positive listing)
KECI (KR)	y (positive listing)
PICCS (PH)	y (positive listing)
INV (CN)	y (positive listing)

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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):	Sulphuric acid: Group A2 (Suspected human carcinogen.); Group A2 (contained in strong inorganic acid mists; suspected human carcinogen)
International Agency for Research on Cancer (IARC):	Sulphuric acid: 1 (strong inorganic mists or vapours containing sulfuric acid; human carcinogen): 1 (Human carcinogen.): 1992
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:	WARNING! This product contains a chemical known in the State of California to cause cancer.
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:	Sulphuric acid
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323):	Water, Aluminium sulphate, Sulphuric acid
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000):	Aluminium sulphate
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5):	Water, Aluminium sulphate, Sulphuric 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:

CONTAINS: Sulphuric acid (7664-93-9), Aluminium sulphate (10043-01-3)

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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, remove to fresh air. Get medical attention if symptoms occur. In case of contact, immediately 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. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

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-1, S-2, F-0, C-0