

# Safety Data Sheet

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

**Product name:** Kodak Rapid Fixer with Hardener, Working solution

**Product code:** 1464114 - Working solution

**Synonyms:** None.

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

**Identified uses:** photographic processing chemical (fixer). For industrial use only.

**Supplier:** Environment, Eastman Kodak Company, Rochester, NY 14652-6267. Columbia, V5G 4P5, Canada. MSDS prepared by Health, Safety and United States; KODAK CANADA INC., 4225 Kincaid Street, Burnaby, British EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York 14650,

call: 1-800-363-1024. For Emergency Health, Safety & Environmental Information,

For Other Information, call the Marketing and Distribution Center in Your Area.

## 2. Hazards identification

**Classification of chemical in accordance with WHMIS 2015:**

Hazard class	Hazard category	Route of exposure
Skin irritation	Category 2	--
Eye irritation	Category 2A	--
Reproductive toxicity	Category 1B	--

### GHS-Labeling

**Contains:**

Acetic acid (64-19-7), Sodium tetraborate, decahydrate (1303-96-4)

**Symbol(s):**



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**Signal word:** Danger

**Hazard statements:** Causes skin irritation. Causes serious eye irritation. May damage fertility or the unborn child.

**Precautionary statements:**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF exposed or concerned: Get medical advice/ attention.

**Storage:** Store locked up.

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

**Other hazards which do not result in classification:**

Dried product residue can act as a reducing agent.

**HMIS IV Hazard Ratings:** Health - 2\*, Flammability - 1, Physical Hazard - 0

**NFPA Hazard Ratings:** Health - 2, Flammability - 1, Instability - 0

NOTE: HMIS IV 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.)
10 - 15	Ammonium thiosulphate (7783-18-8)
1 - 5	Acetic acid (64-19-7)
1 - 5	Sodium bisulphite (7631-90-5)
0.1 - 1	Sodium tetraborate, decahydrate (1303-96-4)
0.1 - 1	Aluminium sulphate (10043-01-3)

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## 4. First aid measures

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

**Eyes:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.

**Skin:** Immediately flush 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, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

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

**Indication of any immediate medical attention and special treatment needed:**

**Treatment:** No information available.

## 5. Firefighting measures

**Extinguishing Media:** Water spray, Dry chemical, Carbon dioxide (CO<sub>2</sub>), Foam.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, (see also Hazardous Decomposition Products sections.)

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

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

**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.

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**Environmental precautions:** Prevent runoff from entering drains, sewers, or streams.

**For Large Spills:** Prevent runoff from entering drains, sewers, or streams.

## 7. Handling and storage

### Precautions for safe handling

**Personal precautions:** Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapour. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

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

**Ventilation:** Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8).

**Conditions for safe storage, including any incompatibilities:** Keep in a dry, cool and well-ventilated place. Cool conditions (5 - 30°C). Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Keep away from incompatible substances (see Incompatibility section.)

## 8. Exposure controls/personal protection

### Occupational exposure controls

Chemical name	Regulatory List	Value Type	Value
Acetic acid	ACGIH	Time weighted average	10 ppm
Acetic acid		Short term exposure limit	15 ppm
	OSHA	Time weighted average	10 ppm
Sodium bisulphite	ACGIH	Time weighted average	25 mg/m3
Sodium tetraborate, decahydrate		Time weighted average	5 mg/m3
			2 mg/m3
			<i>Form of exposure: inhalable particulate matter</i>
		Short term exposure limit	6 mg/m3
			<i>Form of exposure: inhalable particulate matter</i>

**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).

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**Hand protection:** Wear protective gloves/ protective clothing.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. If 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:** No data available

**Odour:** No data available

**Specific gravity:** No data available

**Vapour pressure:** No data available

**Vapour density:** No data available

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

**Water solubility:** No data available

**pH:** No data available

**Flash point:** No data available

**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

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**Explosive properties:** No data available

**Oxidizing properties:** No data available

## 10. Stability and reactivity

**Reactivity:** No data available

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation does not occur.

**Conditions to avoid:** No data available

**Incompatible materials:** Strong oxidizing agents, Acids, Strong bases, sodium hypochlorite (bleach), Halogenated compounds, Oxidizing agents. Contact with strong acids may liberate sulphur dioxide. Contact with strong bases may liberate ammonia.

**Hazardous decomposition products:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Ammonia, chloramine

## 11. Toxicological information

### Effects of Exposure

#### General advice:

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.

Contains: Sodium tetraborate, decahydrate. Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, the doses administered were many times those to which humans would normally be exposed.

**Inhalation:** Airborne dust/mist/vapor may be irritating.

**Eyes:** Causes serious eye irritation.

**Skin:** Causes skin irritation.

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**Ingestion:** May cause irritation of the gastrointestinal tract.

## **Data for Ammonium thiosulphate (CAS 7783-18-8):**

### **Acute Toxicity Data:**

Oral LD50 (Rat): 2,890 mg/kg

- Inhalation (Rat): 2260 mg/m<sup>3</sup> / 4 hr
- Eye irritation: none

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

### **Acute Toxicity Data:**

Oral LD50 (Rat): 3,320 mg/kg

- Oral LD50 (Rat): 3,310 mg/kg
- Inhalation LC50 (Rat): 11.4 mg/l / 4 hr
- Dermal LD50 (Rabbit): 1,060 mg/kg
- Skin irritation: severe
- Eye irritation (washed eyes): severe
- Eye irritation (unwashed eyes): severe

## **Data for Sodium bisulphite (CAS 7631-90-5):**

### **Acute Toxicity Data:**

Oral LD50 (Rat): > 1,600 mg/kg

- Oral LD50 (Rat): 1,310 mg/kg
- Dermal LD50 (Rat): 2,000 mg/kg
- Eye irritation (May irritate eyes.): mild

## **Data for Sodium tetraborate, decahydrate (CAS 1303-96-4):**

### **Acute Toxicity Data:**

Oral LD50 (Rat): 3,493 mg/kg

- Dermal LD50 (Rabbit): > 10,000 mg/kg

## **Data for Aluminium sulphate (CAS 10043-01-3):**

### **Acute Toxicity Data:**

Oral LD50 (Mouse): 6,207 mg/kg

- Oral LD50 (Rat): 1,930 mg/kg
- Skin irritation: No skin irritation
- Eye irritation: severe

### **Mutagenicity/Genotoxicity Data:**

- Cell transformation assay: negative

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## 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.
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.
International Agency for Research on Cancer (IARC):	Group 2A - Probably Carcinogenic to Humans: Sodium tetraborate, decahydrate
U.S. Occupational Safety and Health Administration (OSHA):	OSHA Carcinogen or Potential Carcinogen: Sodium tetraborate, decahydrate
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 estimated

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

**Persistence and degradability:** Readily biodegradable

This product has not been tested for environmental effects.

### Bioaccumulative potential

No data available

### Mobility in soil

No information available.



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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

Not regulated for all modes of transportation.

For more transportation information, go to: [www.kodak.com/go/ship](http://www.kodak.com/go/ship).

## 15. Regulatory information

### Notification status

Regulatory List	Notification status
TSCA	All listed
DSL	All listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	All listed
IECS	All listed
ENCS	All listed
ECI	All listed
NZIoC	All listed
PICCS	All listed
TCSI	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 Acetic acid , Sodium bisulphite

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hazardous substances):

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 thiosulphate
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Acetic acid , Sodium bisulphite , Sodium tetraborate, decahydrate
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):	Ammonium thiosulphate , Acetic acid , Sodium bisulphite , Sodium tetraborate, decahydrate
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Acetic acid , Sodium bisulphite , Sodium tetraborate, decahydrate
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Acetic acid , Sodium bisulphite , Sodium tetraborate, decahydrate
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Ammonium thiosulphate , Acetic acid , Sodium bisulphite , Sodium tetraborate, decahydrate , Ammonium bisulphite , Aluminium sulphate , Sodium sulphate

### 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 Rapid Fixer with Hardener, Working solution

##### Contains:

Acetic acid (64-19-7), Sodium tetraborate, decahydrate (1303-96-4)

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### Symbol(s):



**Signal word:** Danger

**Hazard statements:** Causes skin irritation. Causes serious eye irritation. May damage fertility or the unborn child.

### Precautionary statements:

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention. IF exposed or concerned: Get medical advice/ attention.

**Storage:** Store locked up.

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

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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.

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