

# Safety Data Sheet

Approval/Revision date: 14.12.2010  
Print Date: 14.06.2011  
Z17000000195/Version: 1.8  
Page: 1/6



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

**Product name:** KODAK Rapid Fixer and Replenisher, Part A

**Product code:** 3781192 - Part A

**Supplier:** KODAK LIMITED, Hemel One, Boundary Way, Hemel Hempstead, HP2 7YU, Great Britain

IN EMERGENCY, telephone: 0870-2430270. Available during office hours only.

For further information about this product, telephone 0870-2430270 or email kes@kodak.com.

**Synonyms:** 4896

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

## 2. Hazards identification

This Safety Data Sheet conforms to REACH Regulation (EC) 1907/2006.

Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC

## 3. Composition/information on ingredients

Weight percent	Component	CAS-No.	EINECS-No./ ELINCS No.	Classification
40 - 45	ammonium thiosulphate	7783-18-8	231-982-0	**
5 - 10	sodium acetate	127-09-3	204-823-8	**
1 - 5	Boric acid	10043-35-3	233-139-2	T; Repr.Cat.2; R60, R61*
1 - 5	ammonium sulphite	10196-04-0	233-484-9	**
1 - 5	Acetic acid	64-19-7	200-580-7	C; R10, R35*
0.1 - < 1	Sodium hydrogensulfite	7631-90-5	231-548-0	Xn; R22, R31*

\* Symbol and R Phrase according to EC Annex I

\*\* Substance not listed in EC Annex I

## 4. First aid measures

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

**Eyes:** In case of contact with eyes, flush immediately with plenty of water and seek medical attention.

**Skin:** Immediately flush with plenty of water for at least 15 minutes and wash using soap. Get medical attention if symptoms occur.

# Safety Data Sheet

Approval/Revision date: 14.12.2010  
Print Date: 14.06.2011  
Z17000000195/Version: 1.8  
Page: 2/6

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

## 5. Fire-fighting measures

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Flush with plenty of water.

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.

**Hazardous Combustion Products:** Fire or excessive heat may produce hazardous decomposition products., (see also Stability and Reactivity section).

**Unusual Fire and Explosion Hazards:** Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

## 6. Accidental release measures

**Personal precautions:** See Section 8 for recommendations on the use of personal protective equipment.

**Environmental precautions:** Prevent spillage from entering drains. Absorb spill with vermiculite or other inert absorbant material such as sand or earth, then place in a suitable container for proper disposal. Clean surface thoroughly with water to remove residual contamination.

**Waste disposal:** Contaminated absorbent should be disposed of in accordance with local regulations.

## 7. Handling and storage

**Personal precautions:** Avoid prolonged or repeated breathing of mist or vapour. Avoid contact with eyes and prolonged or repeated contact with skin. Wash thoroughly after handling. Use with adequate ventilation.

**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups. Remove and wash contaminated clothing promptly.

**Storage:** Cool conditions (5 - 30°C). Store in original container. Keep container tightly closed to prevent the loss of water. Keep away from incompatible substances (see Incompatibility section.)

**Ventilation:** Match ventilation rates to conditions of use so as not to exceed any applicable exposure limits (see Section 8). Good general ventilation of 10 or more room volumes per hour in the work area is recommended.

## 8. Exposure controls/personal protection

**Occupational exposure controls:** Not established

**Ventilation:** Avoid exposure to mists and vapours by mixing solutions in closed vessels and/or under local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions.

**Respiratory protection:** In case of insufficient ventilation wear suitable respiratory equipment.

**Eye protection:** Wear safety glasses with side shields or protective goggles whenever mixing or handling solutions.

## Safety Data Sheet

Approval/Revision date: 14.12.2010  
Print Date: 14.06.2011  
Z17000000195/Version: 1.8  
Page: 3/6

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**Skin and body protection:** Using the information provided in Section 2, seek the advice of the glove supplier as to the most suitable glove material. Avoid skin contact when mixing or handling the substance/preparation or a mixture by wearing impervious gloves and protective clothing appropriate to the risk of exposure.

Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact:

Material	Thickness	Breakthrough time
Consult your glove manufacturer.	--	

Consult your glove manufacturer for advice on what glove material to avoid.

The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374. This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

**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:** slight sulphur, slight acetic acid

**Specific gravity:** 1.32

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

**Vapour density:** 0.6

**Volatile fraction by weight:** 40 - 45 %

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

**Water solubility:** complete

**pH:** 5.0

**Flash point:** does not flash

### 10. Stability and reactivity

**Stability:** Stable under normal conditions.

**Incompatibility:** Acids, Strong bases, sodium hypochlorite (bleach), Halogenated compounds, Oxidizing agents. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong acids liberates sulphur dioxide. Contact with base liberates flammable material. Contact with base liberates ammonia.

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

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

# Safety Data Sheet

Approval/Revision date: 14.12.2010  
Print Date: 14.06.2011  
Z17000000195/Version: 1.8  
Page: 4/6

## 11. Toxicological information

### Effects of Exposure

#### General advice:

Contains: Boric acid. Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, high doses to humans handling this material are not expected since oral consumption is not a likely route of significant exposure.

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. Some asthmatics or hypersensitive individuals may experience difficulty breathing if exposed to aerosols or decomposition products that are not anticipated during normal use.

**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. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

#### Acute Toxicity Data:

Oral LD50 (rat): > 2,540 mg/kg

- Dermal LD50: 20 mL/kg
- Skin irritation: moderate
- Eye irritation: slight

## 12. Ecological information

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

#### Potential Toxicity:

Toxicity to fish (LC50): 10 - 100 mg/l

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

**Persistence and degradability:** Not readily biodegradable.

## 13. Disposal considerations

This information is provided to assist users in the correct disposal of working solutions prepared and used to Kodak specifications.

**Working solution:** Recover silver before disposal. Waste material is currently classified as hazardous under Council Directive 91/689/EEC. The European Waste Catalogue Code is 09 01 04 Fixer solutions. Dispose

## Safety Data Sheet

Approval/Revision date: 14.12.2010  
Print Date: 14.06.2011  
Z17000000195/Version: 1.8  
Page: 5/6

according to the local regulations or guidelines that apply to the category of waste. Ensure the use of properly authorised waste management companies.

**Product containers:** If thoroughly cleaned, preferably by rinsing at least three times with small quantities of water, waste product packaging may be consigned for recovery or disposal as non hazardous waste. Whenever possible, minimize waste by using the rinsing water to make up the working solution. The European Waste Catalogue Code is 15 01 02 plastic packaging.

Waste product packaging contaminated by residues of hazardous contents should be consigned for disposal as hazardous waste. In this case, the European Waste Catalogue Code is 15 01 10 packaging containing residues of or contaminated by dangerous substances.

### 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	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

"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.

#### Labelling:

**Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC.**

### 16. Other information

The following is an explanation of the meaning of the Symbol letters and Risk Phrases for the pure substance(s) referred to in Section 2 of this Safety Data Sheet.

## Safety Data Sheet

Approval/Revision date: 14.12.2010

Print Date: 14.06.2011

Z17000000195/Version: 1.8

Page: 6/6

---

C: Corrosive

Xn: Harmful

R10: Flammable.

R22: Harmful if swallowed.

R31: Contact with acids liberates toxic gas.

R35: Causes severe burns.

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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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