

Material Safety Data Sheet

Revision Date: 04/22/2007
00000013735/Version: 1.0
Print Date: 09/09/2008
Page: 1/6

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

Product name: KODAK RP X-OMAT LO Fixer and Replenisher, Working solution

Product code: 8868804 - Working solution

Supplier: Carestream Health, Inc., 150 Verona Street, Rochester, New York, 14608

For Emergency Health Information call, (800) 424-9300

For other information contact 800-328-2910.

Synonyms: None.

2. Hazards identification

CONTAINS: Ammonium bisulphite (10192-30-0), Sodium bisulphite (7631-90-5), Ammonium thiosulphate (7783-18-8)

WARNING!

MAY BE HARMFUL IF SWALLOWED.

DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT.

HMIS II Hazard Ratings:

Health - 1, Flammability - 1, Reactivity (Stability) - 0

NFPA Hazard Ratings:

Health - 3, Flammability - 1, Instability - 0

NOTE: HMIS II and NFPA 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. An asterisk (*), in the HMIS II health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

3. Composition/information on ingredients

Weight %	Components (CAS-No.)
80 - 85	Water (7732-18-5)
10 - 15	Ammonium thiosulphate (7783-18-8)
1 - 5	Sodium thiosulphate (7772-98-7)
< 1	Acetic acid (64-19-7)
< 1	Ammonium bisulphite (10192-30-0)
< 1	Sodium bisulphite (7631-90-5)

4. First aid measures

Material Safety Data Sheet

Revision Date: 04/22/2007
00000013735/Version: 1.0
Print Date: 09/09/2008
Page: 2/6

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

Eyes: Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms occur.

Skin: Wash off with soap and water. Get medical attention if symptoms occur.

Ingestion: Drink 1-2 glasses of water. Seek medical attention. 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. Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products: nitrogen oxides (NOx) sulphur oxides (see also Hazardous Decomposition Products 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

Methods for cleaning up: Collect in a noncombustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.

7. Handling and storage

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

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

Storage: Keep container tightly closed to prevent the loss of water. Store in original container. Keep away from incompatible substances (see Incompatibility section.)

8. Exposure controls / personal protection

Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Sodium bisulphite	ACGIH	Time Weighted Average (TWA):	5 mg/m3

Material Safety Data Sheet

Revision Date: 04/22/2007
00000013735/Version: 1.0
Print Date: 09/09/2008
Page: 3/6

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: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. A respirator should be worn if hazardous decomposition products are likely to be or have been released. Respirator type: Acid gas. See Stability and Reactivity Section. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye protection: It is a good industrial hygiene practice to minimize eye contact. Wear safety glasses with side shields (or goggles).

Skin and body protection: It is a good industrial hygiene practice to minimize skin contact. For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Recommended Decontamination Facilities: Safety shower, eye wash, washing facilities as appropriate to condition of use.

9. Physical and Chemical Properties

Physical form: liquid

Colour: colourless

Odour: odourless

Specific gravity: 1.087

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

Vapor density (air = 1): 0.6

Volatile fraction by weight: 80 - 85 %

Boiling point/range: > 100.0 °C (> 212.0 °F)

Water solubility: complete

pH: 4.2 - 4.5

Flash point: None.

10. Stability and reactivity

Stability: Stable.

Incompatibility: Acids, strong bases, sodium hypochlorite (bleach), oxidizing agents, halogenated compounds. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

Material Safety Data Sheet

Revision Date: 04/22/2007
00000013735/Version: 1.0
Print Date: 09/09/2008
Page: 4/6

Hazardous decomposition products: ammonia, chloramine.

Hazardous Polymerization: Hazardous polymerization does not occur.

11. Toxicological information

Effects of Exposure

Inhalation: Expected to be a low hazard for recommended handling. 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: No specific hazard known. May cause transient irritation.

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

Ingestion: May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

12. Ecological information

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

Potential Toxicity:

Fish LC50: > 100 mg/l

Daphnid EC50: > 100 mg/l

Algal IC50: > 100 mg/l

Waste treatment organisms EC50: > 100 mg/l

Organics Readily Degradable: Readily biodegradable

Potential Bioaccumulation: $\log Pow < 1$

COD (approximate): 80 g/l

BOD (approximate): 65 g/l

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

Material Safety Data Sheet

Revision Date: 04/22/2007
00000013735/Version: 1.0
Print Date: 09/09/2008
Page: 5/6

For more transportation information, go to: <http://ship.carestreamhealth.com>.

15. Regulatory information

U.S. California Prop. 65: none

Carcinogenicity Classification (components present at 0.1% or more):

International Agency for Research on Cancer (IARC): Ammonium bisulphite: 3 (not classifiable as to carcinogenicity to humans), Sodium bisulphite: 3 (not classifiable as to carcinogenicity to humans)
American Conference of Governmental Industrial Hygienists (ACGIH): Sodium bisulphite: Group A4 (Not classifiable as a human carcinogen.)
U.S. National Toxicology Program (NTP): none
U.S. Occupational Safety and Health Administration (OSHA): none

Chemical(s) subject to the reporting requirements of U.S. Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none

16. Other information

US/Canadian Label Statements:

CONTAINS: Ammonium bisulphite (10192-30-0), Sodium bisulphite (7631-90-5), Ammonium thiosulphate (7783-18-8)

WARNING!

MAY BE HARMFUL IF SWALLOWED.

DRIED PRODUCT RESIDUE CAN ACT AS A REDUCING AGENT.

Avoid prolonged or repeated breathing of mist or vapour.

Avoid contact with eyes, skin, and clothing.

Keep container tightly closed to prevent the loss of water.

Keep from contact with clothing and other materials. Remove and wash contaminated clothing promptly.

Ensure adequate ventilation.

Wash thoroughly after handling.

FIRST AID: If swallowed, seek medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Keep out of reach of children.

For additional information, see Material Safety Data Sheet (MSDS) for this material.

Additional hazard precautions for containers greater than 1 gallon of liquid or 5 pounds of solid:

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, carbon dioxide (CO₂).

Material Safety Data Sheet

Revision Date: 04/22/2007
00000013735/Version: 1.0
Print Date: 09/09/2008
Page: 6/6

IN CASE OF SPILL: Flush with plenty of water.

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-1