

MATERIAL SAFETY DATA SHEET

200000404/F/USA
Approval Date: 07/08/1998
Print Date: 01/17/2001
Page 1

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK RP X-OMAT Developer Replenisher

Catalog Number(s): 124 9259 - To Make 10 gallons (U.S.)
125 5835 - To Make 10 gallons (JAPAN)
171 6828 - To Make 20 gallons (U.S.)
131 8989 - To Make 200 gallons (U.S.) - Part A
162 0509 - To Make 200 gallons (U.S.) - Parts B & C
831 7018 - To Make 5400 gallons (U.S.) - Part B
841 4161 - To Make 5400 gallons (U.S.) - Part C
851 2295 - To Make 2400 gallons (U.S.)
859 7494 - To Make 2400 gallons (U.S.)

Manufacturer/Supplier: EASTMAN KODAK COMPANY, Rochester, New York 14650

For Emergency Health, Safety & Environmental Information, call (716) 722-5151

For other information or to request an MSDS, call (800) 242-2424.

Synonym(s): Part A: CIN 10097490, PCD 6159, C-0131.300
Part B: KAN 440512, PCD 5228, C-0131.600
Part C: KAN 440513, PCD 5250, C-0132.010
Working solution: KAN 441665, C-0133.500

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Part A:

60-65 Water (007732-18-5)
20-25 Potassium sulfite (010117-38-1)
9 Hydroquinone (000123-31-9)
1-5 Diethylene glycol (000111-46-6)
1-5 Sodium carbonate (000497-19-8)

Part B:

75-80 Acetic acid (000064-19-7)
10-15 1-phenyl-3-pyrazolidinone (000092-43-3)
5-10 Water (007732-18-5)

Part C:

40-45 Water (007732-18-5)
40-45 Glutaraldehyde (000111-30-8)
5-10 Acetic acid (000064-19-7)
1-5 5-nitroindazole (005401-94-5)

Working solution:

E000073-2-19-20

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 2

85-90	Water (007732-18-5)
5-10	Potassium sulfite (010117-38-1)
3	Hydroquinone (000123-31-9)
1-5	Potassium acetate (000127-08-2)
1-5	Glutaraldehyde bis(potassium bisulfite) (068310-08-7)

3. HAZARDS IDENTIFICATION

Part A:

CONTAINS: Hydroquinone (000123-31-9), diethylene glycol (000111-46-6), potassium sulfite (010117-38-1)

WARNING!

HARMFUL IF SWALLOWED

CAUSES EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

CAN CAUSE KIDNEY DAMAGE

CAN CAUSE CNS EFFECTS

HMIS Hazard Ratings:

Health - * 2, Flammability - 1, Reactivity - 0, Personal Protection - C

NFPA Hazard Ratings:

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

Part B:

CONTAINS: Acetic acid (000064-19-7), 1-phenyl-3-pyrazolidinone (000092-43-3)

DANGER!

POISON

MAY BE FATAL OR HARMFUL IF SWALLOWED

VAPOR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT

CAUSES SEVERE SKIN AND EYE BURNS

MAY CAUSE ALLERGIC SKIN REACTION

COMBUSTIBLE LIQUID AND VAPOR

BASED ON REPEATED-DOSE INGESTION STUDIES IN ANIMALS, A COMPONENT OF THIS PRODUCT MAY CAUSE BLOOD, TESTICULAR, AND ADVERSE REPRODUCTIVE EFFECTS

HMIS Hazard Ratings:

Health - * 3, Flammability - 2, Reactivity - 0, Personal Protection - H

NFPA Hazard Ratings:

Health - 3, Flammability - 2, Reactivity (Stability) - 0

Part C:

CONTAINS: Glutaraldehyde (000111-30-8), acetic acid (000064-19-7)

DANGER!

CAUSES SKIN AND EYE BURNS

MATERIAL SAFETY DATA SHEET

200000404/F/USA
Approval Date: 07/08/1998
Print Date: 01/17/2001
Page 3

HARMFUL IF SWALLOWED
VAPOR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT
MAY CAUSE ALLERGIC SKIN REACTION
POTENTIAL PEROXIDE FORMER

HMIS Hazard Ratings:
Health - 3, Flammability - 1, Reactivity - 0, Personal Protection - H

NFPA Hazard Ratings:
Health - 2, Flammability - 1, Reactivity (Stability) - 0

Working solution:

CONTAINS:
WARNING! Hydroquinone (000123-31-9), potassium sulfite (010117-38-1)
HARMFUL IF SWALLOWED
CAUSES EYE IRRITATION
MAY CAUSE ALLERGIC SKIN REACTION

HMIS Hazard Ratings:
Health - 2, Flammability - 0, Reactivity - 0, Personal Protection - C

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

NOTE: HMIS 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. The personal protection index is only intended for general guidance on personal protection equipment (PPE) that is suitable for the potential hazards of the material. PPE (e.g., respirators) may not be needed if engineering controls (e.g., local ventilation) are adequate. An asterisk (*), in the HMIS health field, designates potential chronic or target organ hazards. To adequately address safe handling, ALL information in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation:

Part A & Working solution: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Part B & Part C: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Eyes:

Part A & Working solution: Immediately flush with plenty of water for at

E000073-2-18-20

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 4

least 15 minutes. Get medical attention.

Part B & Part C: Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately. In case of irritation from airborne exposure, move to fresh air.

Skin:

Part A & Working solution: Immediately flush with plenty of water and wash with a non-alkaline (acid) type of skin cleaner. If skin irritation or an allergic skin reaction develops, get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Part B & Part C: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion:

Part A & Working solution: Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Part B & Part C: Do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

5. FIRE FIGHTING MEASURES

Extinguishing Media:

Part A, Part B & Part C: Water spray, carbon dioxide (CO₂), dry chemical, alcohol foam

Working solution: Use appropriate agent for adjacent fire.

Special Fire-Fighting Procedures:

Part A, Part C & Working solution: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Part B: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products. Use water spray to keep fire-exposed containers cool.

Hazardous Combustion Products:

MATERIAL SAFETY DATA SHEET

200000404/F/USA
Approval Date: 07/08/1998
Print Date: 01/17/2001
Page 5

Part A: Carbon dioxide, carbon monoxide, oxides of sulfur

Part B: Carbon dioxide, carbon monoxide, oxides of nitrogen

Part C: Carbon dioxide, carbon monoxide

Working solution: None (noncombustible), (see also Hazardous Decomposition Products section)

Unusual Fire and Explosion Hazards:

Part A: & Working solution: None

Part B: Classified as combustible.

Part C: May form peroxides of unknown stability. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

6. ACCIDENTAL RELEASE MEASURES

Part A & Part C & Working solution: Flush to sewer with large amounts of water. Otherwise, absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

Part B: Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

7. HANDLING AND STORAGE

Personal Precautionary Measures:

Part A & Working solution: Avoid prolonged or repeated breathing of mist or vapor. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. The routine use of a nonalkaline (acid) type of hand cleaner and regular cleaning of working surfaces, gloves, etc. will help minimize the possibility of a skin reaction.

Part B & Part C: Do not get in eyes, on skin, on clothing. Do not breathe vapor at concentrations greater than the exposure limits. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion:

E000073-2-17-20



MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 6

Part A: Keep from contact with oxidizing materials.

Part B: Keep from contact with oxidizing materials. Keep away from heat and flame. Use with adequate ventilation.

Part C: Keep from contact with oxidizing materials. Minimize exposure to air. If peroxide formation is suspected, do not open or move container. Remove and wash contaminated clothing promptly.

Working solution: No special precautionary measures should be needed under anticipated conditions of use.

Storage:

Part A, Part B & Working solution: Keep container closed. Keep away from incompatible substances (see Incompatibility section).

Part C: Keep container tightly closed. Store away from heat and light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV):

Acetic acid: 10 ppm TWA; 15 ppm STEL

Glutaraldehyde: 0.05 mg/m³ Ceiling

Hydroquinone: 2 mg/m³ TWA

Eastman Kodak Company industrial hygiene guideline:

1-phenyl-3-pyrazolidinone: 0.2 mg/m³ TWA

OSHA (USA) Permissible Exposure Limit (PEL - 1971 Table Z-1 Values):

Acetic acid: 10 ppm TWA

Hydroquinone: 2 mg/m³ TWA

Ventilation:

Part A & Working solution: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions.

Part B & Part C: Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Respiratory Protection:

MATERIAL SAFETY DATA SHEET

200000404/F/USA
Approval Date: 07/08/1998
Print Date: 01/17/2001
Page 7

Part A & Working solution: None should be needed. 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.

Part B & Part C: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Full-face organic vapor cartridge. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection:

Part A & Working solution: Wear safety glasses with side shields (or goggles).


Part B & Part C: If a full-face respirator is not worn, wear vapor-tight chemical goggles.

Skin Protection: Wear impervious gloves and protective clothing appropriate for the risk of exposure.

Recommended Decontamination Facilities: Eye bath, safety shower, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

	Part A	Part B	Part C	Working solution
Physical Form:	liquid	liquid	liquid	liquid
Color:	light yellow	orange	yellow - green	yellow
Odor:	odorless	pungent	aldehyde	slight
Specific Gravity (water = 1):	1.317	1.081	1.127	1.082
Vapor Pressure at 20 C (68 F):	24 mbar (18 mm Hg)	24 mbar (18 mm Hg)	24 mbar (18 mm Hg)	24 mbar (18 mm Hg)
Vapor Density (Air = 1):	0.6	1.7	1.8	0.6



E000073-2-16-20

MATERIAL SAFETY DATA SHEET

200000404/F/USA
 Approval Date: 07/08/1998
 Print Date: 01/17/2001
 Page 8

Volatile Fraction by Weight:	60-65%	85-90%	95-99%	85-90%
Boiling Point:	>100 C (>212 F)	>100 C (>212 F)	>100 C (>212 F)	>100 C (>212 F)
Solubility in Water:	complete	complete	complete	complete
pH:	11.4	< 1.0	2.7	10.3
Flash Point:	none	57 C (134 F) Setaflash closed cup	none	none, noncombustible liquid

10. STABILITY AND REACTIVITY

Stability:

Part A, Part B & Working solution: Stable

Part C: Normally stable; however, on long term storage, materials containing similar functional groups form peroxides of unknown stability.

Incompatibility:

Part A: Strong oxidizing agents, strong acids

Part B: Strong oxidizing agents, bases, amines, metals

Part C: Strong oxidizing agents. Material can react with polymerization initiators

Working solution: Strong acids

Hazardous Decomposition Products:

Working solution: Carbon dioxide, carbon monoxide, sulfur dioxide

Hazardous Polymerization:

Part A, Part B & Working solution: Will not occur.

Part C: Nonhazardous polymerization may occur. Avoid initiators, accelerators, heat, pressure, contamination.

MATERIAL SAFETY DATA SHEET

200000404/F/USA
Approval Date: 07/08/1998
Print Date: 01/17/2001
Page 9

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General:

Part A: Diethylene glycol. Can cause kidney damage. Can cause CNS effects.

Part A & Working solution: Hydroquinone. In F-344 rats, chronic oral administration of hydroquinone has resulted in the formation of benign kidney tumors thought to be secondary to nephropathy. Hydroquinone-induced nephropathy following oral administration has been noted in the male F-344 rat, but not in other species or rat strains tested. Although an increase in mononuclear cell leukemia in F-344 female rats has been reported following chronic oral administration of hydroquinone, this finding was not reproduced in a subsequent study. There was no evidence of carcinogenicity in male mice following chronic oral administration of hydroquinone; some evidence of carcinogenic activity was shown in female mice by an increase in hepatocellular neoplasms which were primarily benign adenomas, although this finding was not reproduced in a subsequent study. No skin tumors were reported in mice following long-term dermal application of hydroquinone. Therefore, neoplastic responses have not been consistent across route of exposure, species, or sex. Hydroquinone is generally negative in bacterial mutagenicity tests; there is evidence for the clastogenicity (chromosome breakage) of hydroquinone in vivo and in vitro. The relevance of the chromosomal effects in test animals in predicting human risk is unclear.

Part B: Based on repeated-dose ingestion studies in animals, 1-phenyl-3-pyrazolidinone, a component of this product may cause blood, testicular, and adverse reproductive effects.

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:

Part A & Working solution: Expected to be a low hazard for recommended handling. In contact with strong acids or if heated, sulfites may liberate sulfur dioxide gas. Sulfur dioxide gas is irritating to the respiratory tract. Some asthmatics or hypersensitive individuals may experience difficult breathing.

800073-2-15-20

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 10

Part B: Vapor extremely irritating.

Part C: Vapor extremely irritating. Although it is known that glutaraldehyde is a respiratory tract irritant and may aggravate pre-existing asthmatic disorders, the supporting data for respiratory sensitization are less conclusive.

Eyes:

Part A & Working solution: Causes irritation.

Part B: Causes severe burns. Vapor extremely irritating.

Part C: Causes burns. Vapor extremely irritating.

Skin:

Part A & Working solution: May cause allergic skin reaction based on human experience. May cause skin depigmentation. Prolonged or repeated contact with aqueous solutions may cause irritation.

Part B: Causes severe burns. May cause allergic skin reaction.

Part C: Causes burns. May cause allergic skin reaction.

Ingestion:

Part A & Working solution: Harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. May cause irritation of the gastrointestinal tract.

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

Part C: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

Data for 1-phenyl-3-pyrazolidinone:

Acute Toxicity Data:

Oral LD-50 (male rat): 476 mg/kg

Oral LD-50 (female rat): 336 mg/kg

Dermal LD-50: > 1000 mg/kg, estimated

Skin irritation: slight irritation

Repeated skin application: slight irritation

Skin sensitization: slight

Eye irritation (unwashed eyes): slight irritation

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 11

Definitions for the following section(s): LOEL = lowest-observed-effect level, LOAEL = lowest-observed-adverse-effect, NOAEL = no observed-adverse-effect level, NOEL = no-observed-effect level.

Subchronic Toxicity Data:

Oral study (90 days, rat):

LOEL = 0.32 % in diet (target organ effects: testes)
LOEL = 0.08 % in diet (reduced feed intake)
LOEL = 0.02 % in diet (target organ effects: red blood cell)
NOEL = not established

12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.

Summary: Data for the major components of this material have been used to estimate the environmental impact of this material. However, this material, itself, has not been tested for environmental effects.

Part A:

This material is a strongly alkaline aqueous solution, and this property may cause adverse environmental effects. It is expected to have the following properties: a moderate biochemical oxygen demand and may cause oxygen depletion in aqueous systems, a high potential to affect some aquatic organisms, a moderate potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination and/or early growth of some plants, a low potential to persist in the environment, a low potential to bioconcentrate. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

Part B:

This material is a strongly acidic aqueous solution, and this property may cause adverse environmental effects. It is expected to have the following properties: a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a high potential to affect some aquatic organisms, a high potential to affect secondary waste treatment microbial metabolism, a high potential to affect the germination and/or early growth of some plants, a low potential to persist in the environment, a low potential to bioconcentrate. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

E000073-2-14-20

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 12

Part C:

This material is a moderately acidic aqueous solution, and this property may cause adverse environmental effects. It is expected to have the following properties: a low biochemical oxygen demand and little potential to cause oxygen depletion in aqueous systems, a moderate potential to affect some aquatic organisms, a moderate potential to affect secondary waste treatment microbial metabolism, a moderate potential to affect the germination and/or early growth of some plants, a low potential to persist in the environment, a low potential to bioconcentrate. After dilution with a large amount of water, followed by secondary waste treatment, this material is not expected to cause adverse environmental effects.

Working solution:

This material is a moderately alkaline aqueous solution, and this property may cause adverse environmental effects. It is expected to have the following properties: a low biochemical oxygen demand and little potential to cause oxygen depletion in aqueous systems, a high potential to affect some aquatic organisms, a high potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination and/or early growth of some plants, a low potential to persist in the environment, a low potential to bioconcentrate.

13.

Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Part A, Part C & Working solution: Flush to sewer with large amounts of water.

Part B: Contract with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

- For transportation information regarding this product call the Kodak Worldwide Transportation Hazmat Hot Line: (716) 722-2400 between 8 a.m. and 5 p.m. (Eastern Standard Time), Monday through Friday.
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15. REGULATORY INFORMATION

- Material(s) known to the State of California to cause cancer: None
- Material(s) known to the State of California to cause adverse reproductive effects: None

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 13

-
- Carcinogenicity Classification (components present at 0.1% or more):
 - International Agency for Research on Cancer (IARC): None
 - American Conference of Governmental Industrial Hygienists (ACGIH): None
 - National Toxicology Program (NTP): None
 - Occupational Safety and Health Administration (OSHA): None

 - Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: Hydroquinone
-

16. OTHER INFORMATION

US/Canadian Label Statements:

Part A:

CONTAINS: Hydroquinone (000123-31-9), diethylene glycol (000111-46-6), potassium sulfite (010117-38-1)

WARNING!

CAN CAUSE KIDNEY DAMAGE

CAN CAUSE CNS EFFECTS

HARMFUL IF SWALLOWED

CAUSES EYE IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated breathing of mist or vapor.

Use with adequate ventilation.

Wash thoroughly after handling.

FIRST AID: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. In case of skin contact, immediately wash with soap and plenty of water. Get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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.

E000073-2-13-20

MATERIAL SAFETY DATA SHEET

200000404/F/USA

Approval Date: 07/08/1998

Print Date: 01/17/2001

Page 14

IN CASE OF FIRE: Use water spray, dry chemical, carbon dioxide (CO2) alcohol foam.

Part B:

CONTAINS: Acetic acid (000064-19-7), 1-phenyl-3-pyrazolidinone (000092-43-3)

POISON

DANGER!

MAY BE FATAL OR HARMFUL IF SWALLOWED

CAUSES SEVERE SKIN AND EYE BURNS

VAPOR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT

MAY CAUSE ALLERGIC SKIN REACTION

COMBUSTIBLE LIQUID AND VAPOR

BASED ON REPEATED-DOSE INGESTION STUDIES IN ANIMALS, A COMPONENT OF THIS PRODUCT MAY CAUSE BLOOD, TESTICULAR, AND ADVERSE REPRODUCTIVE EFFECTS

Do not breathe vapor at concentrations greater than the exposure limits.

Do not get in eyes, on skin, on clothing.

Use only with adequate ventilation.

Keep away from heat and flame.

Keep container closed.

Wash thoroughly after handling.

FIRST AID: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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.

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 foam, dry chemical, carbon dioxide (CO2). Use water spray to keep fire-exposed containers cool.

IN CASE OF SPILL: Eliminate all ignition sources.

MATERIAL SAFETY DATA SHEET

200000404/F/USA
Approval Date: 07/08/1998
Print Date: 01/17/2001
Page 15

Part C:

CONTAINS: Glutaraldehyde (000111-30-8), acetic acid (000064-19-7)
DANGER!
CAUSES SKIN AND EYE BURNS
HARMFUL IF SWALLOWED
VAPOR EXTREMELY IRRITATING TO THE EYES AND RESPIRATORY TRACT
MAY CAUSE ALLERGIC SKIN REACTION
POTENTIAL PEROXIDE FORMER

Do not breathe vapor at concentrations greater than the exposure limits.
Do not get in eyes, on skin, on clothing.
Keep container tightly closed.
Store away from heat and light.
Do not allow to evaporate to near dryness.
Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly.
Use only with adequate ventilation.
Wash thoroughly after handling.
Avoid heat or contamination.

FIRST AID: If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. In case of eye irritation from airborne exposure, move to fresh air. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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.

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, dry chemical, carbon dioxide (CO2), alcohol foam.

Working solution:



E000073-2-12-20