

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 1/13



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

Product name: KODAK ACCUMAX Rapid Access Developer and Replenisher

Product code: 8875569

Synonyms: PCD 5166

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

Identified uses: photographic processing chemical. For industrial use only.

Supplier: EASTMAN KODAK COMPANY, 343 State Street, Rochester, New York 14650

For Emergency Health, Safety & Environmental Information, call (585) 722-5151 (USA)

For further information about this product, call (800) 242-2424.

2. Hazards identification

Classification of the chemical in accordance with paragraph (d) of 29 CFR 1910.1200:

Hazard class	Hazard category	Route of exposure
Skin corrosion/irritation	Category 2	--
Serious eye damage	Category 1	--
Skin sensitisation	Category 1	--

GHS-Labeling

Contains:

Hydroquinone (123-31-9), Sodium carbonate (497-19-8), Sodium bromide (7647-15-6), Ethylenediaminetetraacetic acid (60-00-4), Potassium hydroxide (1310-58-3)

Symbol(s):



Signal word: Danger

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 2/13

Hazard statements: Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction.

Precautionary statements:

Prevention: Wear protective gloves/ eye protection/ face protection. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response: Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash before reuse.

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

HMIS III Hazard Ratings: Health - 3, Flammability - 0, Physical Hazard - 0

NFPA Hazard Ratings: Health - 3, 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 percent	Components - (CAS-No.)
5 - 10	Potassium sulphite (10117-38-1)
5 - 10	Hydroquinone (123-31-9)
1 - 5	Sodium carbonate (497-19-8)
1 - 5	Sodium bromide (7647-15-6)
1 - 5	Potassium hydroxide (1310-58-3)

4. First aid measures

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

Eyes: 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.

Safety Data Sheet

Revision Date: 03/17/2015

Z1700000313/Version: 2.1

Print Date: 04/09/2015

Page: 3/13

Skin: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

Ingestion: If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.

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

Indication of any immediate medical attention and special treatment needed:

Treatment: Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended.

5. Firefighting measures

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: None (noncombustible), (see also Hazardous Decomposition Products sections.)

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

Environmental precautions: No information available.

7. Handling and storage

Precautions for safe handling

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 4/13

Personal precautions: Avoid breathing mist or vapour at concentrations greater than the exposure limits. Do not get in eyes and avoid contact with skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: No special technical protective measures required.

Conditions for safe storage, including any incompatibilities: 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
Hydroquinone	ACGIH	Time weighted average	1 mg/m ³
Hydroquinone	OSHA	Time weighted average	2 mg/m ³
Potassium hydroxide	ACGIH	Ceiling Limit Value	2 mg/m ³

Appropriate engineering controls: 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.

Individual protection measures, such as personal protective equipment

Eye protection: Wear safety glasses with side shields (or goggles).

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

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 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: off-white

Odour: odourless

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 5/13

Specific gravity: 1.26

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

Vapour density: 0.6

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

Water solubility: complete

pH: 10.8

Flash point: does not flash

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

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

Safety Data Sheet

Revision Date: 03/17/2015

Z17000000313/Version: 2.1

Print Date: 04/09/2015

Page: 6/13

Incompatible materials: Acids, Strong oxidizing agents. Contact with strong acids liberates sulphur dioxide.

Hazardous decomposition products: Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

Contains: Hydroquinone. There is insufficient evidence for classifying hydroquinone as a suspected carcinogenic or mutagenic substance in humans. No increases in cancer rates were observed in an epidemiology study which looked at mortality among more than 800 persons employed primarily in the manufacture of hydroquinone. Carcinogenicity studies in animals were inconclusive. Rats and mice were given hydroquinone by stomach tube or at high concentrations in the diet. Responses were not consistent across route of exposure, species or sex. The International Agency for Research on Cancer (IARC) has classified hydroquinone in Group 3, i.e., "not classifiable" as a carcinogen. 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 chromosomal effects in test animals in predicting human risk is unclear.

Contains: Sodium bromide. May damage fertility or the unborn child. Ingestion of bromide salts can cause nausea, vomiting, headache, irritability, delirium, memory loss, decreased appetite, joint pain, hallucinations, stupor, coma, and acne like rash on face, legs, and trunk.

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: Causes serious eye damage.

Skin: Causes skin irritation. May cause an allergic skin reaction. May cause skin depigmentation.

Ingestion: Expected to be a low hazard for recommended handling. May cause irritation of the gastrointestinal tract. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Data for Potassium sulphite (CAS 10117-38-1):

Acute Toxicity Data:

Oral LD50 (Rat): > 3,200 mg/kg

- Oral LD50 (Mouse): > 3,200 mg/kg

Safety Data Sheet

Revision Date: 03/17/2015

Z17000000313/Version: 2.1

Print Date: 04/09/2015

Page: 7/13

- Dermal LD50 (Guinea pig): > 20,000 mg/kg
- Skin irritation: slight to moderate

Data for Hydroquinone (CAS 123-31-9):

Acute Toxicity Data:

Oral LD50 (male Rat): 400 mg/kg

- Oral LD50 (male Mouse): 100 - 200 mg/kg
- Oral LD50 (Rat): 298 mg/kg
- Dermal LD50 (Guinea pig): > 1,000 mg/kg
- Dermal LD50 (Rabbit): 74,800 mg/kg
- Skin irritation: slight
- Skin Sensitization (Guinea pig): positive
- Eye irritation: moderate

Mutagenicity/Genotoxicity Data:

- Salmonella typhimurium assay (Ames test): negative (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Chromosomal aberration assay: positive (in presence of activation)
- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)

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.

Repeated dose toxicity:

- Dermal (17-day, Rat): NOEL; 3800 mg/kg/day
- Dermal (17-day): Lowest observed effect level; 4800 mg/kg/day

Developmental Toxicity Data:

- Oral (female Rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (female Rat): NOAEL for developmental toxicity; mg/kg/day

Data for Sodium carbonate (CAS 497-19-8):

Acute Toxicity Data:

Oral LD50 (Rat): 4,090 mg/kg

- Inhalation LC50 (Rat): 2.300 mg/l / 2 hr
- Inhalation LC50 (Rat): 2,300 mg/m³ / 2 hr
- Dermal LD50 (Mouse): 2,210 mg/kg
- Skin irritation: slight
- Eye irritation: severe

Data for Sodium bromide (CAS 7647-15-6):

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 8/13

Acute Toxicity Data:

Oral LD50 (Rat): 3,400 mg/kg

- Dermal LD50 (Rabbit): > 2,000 mg/kg
- Skin irritation: none
- Skin Sensitization: none
- Eye irritation: slight

Data for Potassium hydroxide (CAS 1310-58-3):

Acute Toxicity Data:

Oral LD50 (Rat): 273 mg/kg

- Oral LD50 (Rat): 284 mg/kg
- Skin irritation: Corrosive
- Eye irritation: Corrosive

Carcinogenicity

American Conference of Governmental Industrial Hygienists (ACGIH):	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans: Hydroquinone
International Agency for Research on Cancer (IARC):	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
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	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:

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 9/13

Toxicity to fish (LC50): < 1 mg/l

Toxicity to daphnia (EC50): Daphnia (water flea): 1 - 10 mg/l

Persistence and degradability: Readily biodegradable

Bioaccumulative potential

No data available

Mobility in soil

No information available.

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 below is provided to assist in documentation. It represents the dangerous goods classification before any regulatory exceptions are taken (e.g. "limited quantity") and therefore may not represent the final classification. The final classification as it pertains to the product packaging configuration (including labeling, marking, and exceptions) may be obtained via the Dangerous Goods Worksheet which can be found at www.kodak.com/go/ship.

IATA: UN number: UN3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)
Class: 9
Packaging group: III
Marine Pollutant status: Marine pollutant
Marine Pollutant(s): hydroquinone

IMDG: UN number: UN3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (hydroquinone)
Class: 9
Packaging group: III
Marine Pollutant status: Marine pollutant
Marine Pollutant(s): hydroquinone

Safety Data Sheet

Revision Date: 03/17/2015
Z1700000313/Version: 2.1
Print Date: 04/09/2015
Page: 10/13

US DOT: UN number: UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (hydroquinone)

Class: 9

Packaging group: III

Marine Pollutant status: Marine pollutant

Marine Pollutant(s): hydroquinone

For more transportation information, go to: www.kodak.com/go/ship.

15. Regulatory information

Notification status

Regulatory List	Notification status
TSCA	Not all listed
DSL	Not all listed
NDSL	None listed
EINECS	Not all listed
ELINCS	None listed
NLP	None listed
AICS	Not all listed
IECS	Not all listed
ENCS	Not all listed
ECI	Not all listed
NZIoC	Not all listed
PICCS	Not 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 hazardous substances):	Hydroquinone , Ethylenediaminetetraacetic acid , Potassium hydroxide
U.S. - CERCLA/SARA - Section 302 (40 CFR § 355 Appendices A and B - The List of Extremely Hazardous	Hydroquinone

Safety Data Sheet

Revision Date: 03/17/2015

Z17000000313/Version: 2.1

Print Date: 04/09/2015

Page: 11/13

Substances and Their Threshold Planning Quantities):

U.S. - CERCLA/SARA - Section 313 (40 CFR § 372.65 Toxic Chemical Release Reporting):	Hydroquinone
U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances:	Hydroquinone , Ethylenediaminetetraacetic acid , Potassium hydroxide
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):	Hydroquinone , Ethylenediaminetetraacetic acid , Potassium hydroxide
U.S. - Minnesota Employee Right-to-Know (5206.0400, Subpart 5. List of Hazardous Substances):	Hydroquinone , Potassium hydroxide
U.S. - New Jersey - Worker and Community Right to Know Act (N.J.S.A. 34:5A-1):	Hydroquinone , Ethylenediaminetetraacetic acid , Potassium hydroxide
U.S. - Pennsylvania - Part XIII. Worker and Community Right-to-Know Act (Chapter 323 Hazardous Substance List, Appendix A):	Water , Potassium sulphite , Hydroquinone , Sodium carbonate , Ethylenediaminetetraacetic acid , Potassium hydroxide

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 ACCUMAX Rapid Access Developer and Replenisher

Contains:

Hydroquinone (123-31-9), Sodium carbonate (497-19-8), Sodium bromide (7647-15-6), Ethylenediaminetetraacetic acid (60-00-4), Potassium hydroxide (1310-58-3)

Symbol(s):

Safety Data Sheet

Revision Date: 03/17/2015
Z17000000313/Version: 2.1
Print Date: 04/09/2015
Page: 12/13



Signal word: Danger

Hazard statements: Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction.

Precautionary statements:

Prevention: Wear protective gloves/ eye protection/ face protection. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response: Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash before reuse.

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

FIRST AID: If inhaled, remove to fresh air. Get medical attention if symptoms occur. 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 ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. **Note to Physicians:** Strong alkalis bind tissue protein. Following initial flushing of the eye with water, continued irrigation of the eye with saline is recommended. 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.

Safety Data Sheet

Revision Date: 03/17/2015

Z17000000313/Version: 2.1

Print Date: 04/09/2015

Page: 13/13

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-3, F-0, C-0