

Safety Data Sheet

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

1.1. Product identifier: KODAK ACCUMAX Rapid Access Developer and Replenisher

Product code: 5272869

MEGA CODE: 57-61718

Synonyms: 5166

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

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

1.3. Details of the supplier of the safety data sheet: KODAK LIMITED, Hemel One, Boundary Way, Hemel Hempstead, HP2 7YU, Great Britain

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

1.4. Emergency telephone number:

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

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to EU Directives 67/548/EEC or 1999/45/EC:

Harmful, Dangerous for the environment. Limited evidence of a carcinogenic effect. Possible risk of irreversible effects. Irritating to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms.

2.2. Label elements:

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.

Labelling according to 67/548/EEC or 1999/45/EC:



Symbol/Indication of Danger:

Xn: Harmful
N: Dangerous for the environment

Risk Phrases:

R40: Limited evidence of a carcinogenic effect.
R68: Possible risk of irreversible effects.

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R36: Irritating to eyes.
R43: May cause sensitization by skin contact.
R50: Very toxic to aquatic organisms.

Safety Phrases:

S24: Avoid contact with skin.
S36/37: Wear suitable protective clothing and gloves.
S57: Use appropriate container to avoid environmental contamination.

2.3. Other hazards

None known.

3. Composition/information on ingredients

Weight percent	Component	CAS-No. EC No. REACH Reg. No.	Classification according to 1272/2008/EC	Classification according to 67/548/EEC
15 - 20	potassium sulphite	10117-38-1 233-321-1 not available	**	**
5 - 10	Hydroquinone	123-31-9 204-617-8 not available	Acute Tox. 4 H302 Eye Dam. 1 H318 Skin Sens. 1 H317 Muta. 2 H341 Carc. 2 H351 Aquatic Acute 1 H400 *	Xn, N; Carc.Cat.3; Mut.Cat.3; R22, R40, R41, R43, R68, R50 *
1 - 5	Sodium carbonate	497-19-8 207-838-8 not available	Eye Irrit. 2 H319 *	Xi; R36 *
1 - 5	sodium bromide	7647-15-6 231-599-9 not available	**	**

Full text of R- and H-phrases: see Section 16.

* Substance classification as listed in Annex VI to Regulation (EC) No 1272/2008

** Substance not listed in Annex VI to Regulation (EC) No 1272/2008

4. First aid measures

4.1. Description of first aid measures

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

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

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

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

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

4.3. Indication of immediate medical attention and special treatment needed: No information available.

5. Fire-fighting measures

5.1. Extinguishing Media: The product is not flammable. Use appropriate agent for adjacent fire.

5.2. Special hazards arising from the substance or mixture

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

5.2.2. Unusual Fire and Explosion Hazards: None.

5.3. Advice for firefighters: Wear self-contained breathing apparatus and protective clothing.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

6.2. 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.

6.3. Methods and materials for containment and cleaning up: Contaminated absorbent should be disposed of in accordance with local regulations.

6.4. Reference to other sections: See Section 8 for recommendations on the use of personal protective equipment.

7. Handling and storage

7.1. Precautions for safe handling

7.1.1. Personal precautions: Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use with adequate ventilation.

7.1.2. Prevention of Fire and Explosion: No special precautionary measures should be needed under anticipated conditions of use.

7.1.3. 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.

7.2. Conditions for safe storage, including any incompatibilities: Cool conditions (5 - 30°C). Keep container closed. Keep away from incompatible substances (see Incompatibility section.)

7.3. Specific end uses: No information available.

8. Exposure controls/personal protection

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8.1. Control parameters

8.1.1. Occupational exposure controls

Chemical Name	Regulatory List	Value Type	Value
Hydroquinone	EH40	time weighted average	0.5 mg/m ³
		Short term exposure limit	1.5 mg/m ³
Hydroquinone	HSA	time weighted average	0.5 mg/m ³
Sulphur dioxide		time weighted average	2 ppm 5 mg/m ³
		Short term exposure limit	5 ppm 13 mg/m ³

8.2. Exposure controls

8.2.1. Appropriate engineering controls: 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.

8.2.2. Individual protection measures, such as personal protective equipment

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

Hand 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
Nitrile rubber	>= 0.38 mm	> 480 min
Neoprene	>= 0.65 mm	> 240 min
butyl-rubber	>= 0.36 mm	> 480 min

Avoid natural rubber gloves.

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.

Respiratory protection: In case of insufficient ventilation, wear personal respiratory protection designed to protect against both aerosols and acid gas.

General health and safety measures: Safety shower, eye wash, washing facilities as appropriate to condition of use.

8.2.3. Environmental exposure controls: No information available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid

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Colour: off-white

Odour: odourless

Odour Threshold: no data available

pH: 10.8

Melting point/freezing point: no data available

Initial boiling point and boiling range: > 100 °C (212.0 °F)

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

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

Vapour density: 0.6

Specific gravity: 1.26

Volatile fraction by weight: 65 - 70 %

Water solubility: complete

Partition coefficient: n-octanol/water: no data available

Autoignition 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

10.1. Reactivity: no data available

10.2. Chemical stability: Stable under normal conditions.

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

10.4. Conditions to avoid: no data available

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

10.6. Hazardous decomposition products: Carbon oxides, Sulphur oxides

11. Toxicological information

Effects of Exposure

General advice:

Contains: Hydroquinone. Hydroquinone has been classified as a Category 3 mutagen and carcinogen by the European Union based on testing of rats and mice given hydroquinone by stomach tube or at high dietary levels. The International Agency for Research on Cancer (IARC) under ranking for cancer potential has classified hydroquinone in Group 3, i.e. "not classifiable" as a carcinogen. In the European Union a Category 3 mutagen attracts the risk phrase R68 "Possible risk of irreversible effects" at concentrations above 1%, and a Category 3 carcinogen attracts the risk phrase R40 "Limited evidence of a carcinogenic effect" at concentrations above 1%. Exposure to products containing such substances should be controlled to below established control limits and special care should be taken with pregnant or breast-feeding women to ensure appropriate controls are in place to control the risk.

Contains: sodium bromide. 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.

Toxicokinetics, metabolism and distribution

no data available

Acute toxicity

no data available

Corrosivity and irritation

no data available

Sensitisation

no data available

CMR effects

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

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Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Aspiration hazard

No information available.

Information on likely routes 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: Irritating to eyes.

Skin: May cause sensitization by skin contact.

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.

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
- 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 (rat): 400 mg/kg

- Oral LD50 (rat): > 375 mg/kg
- Dermal LD50 (guinea pig): > 1,000 mg/kg
- Dermal absorption rate: 1.1 micrograms (s) / cm² / hour
- Dermal LD50 (guinea pig): > 4,800 mg/kg
- Skin irritation: slight
- Eye irritation: moderate
- Skin Sensitization (guinea pig): positive

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)

Developmental Toxicity Data:

Oral (female rabbit): NOEL for developmental toxicity; 25mg/kg/day

Repeated dose toxicity:

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Dermal (17-day, rat): NOEL; 3800 mg/kg/day

- Dermal (17-day): Lowest observable effect level; 4800 mg/kg/day

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

Acute Toxicity Data:

Oral LD50 (rat): 1,600 - 3,200 mg/kg Screen

- Dermal LD50 (mouse): 2,210 mg/kg
- Skin irritation: slight
- Eye irritation: mild

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

Acute Toxicity Data:

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

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

12. Ecological information

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

12.1. Toxicity

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

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

12.2. Persistence and degradability

Persistence and degradability: Readily biodegradable.

12.3. Bioaccumulative potential

no data available

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

13. Disposal considerations

13.1. Waste treatment methods

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

Working solution: Waste material is currently classified as hazardous under Council Directive 91/689/EEC. The European Waste Catalogue Code is 09 01 01 Water based developer and activator. Dispose 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

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

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

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

RID: UN number: UN3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (hydroquinone)
Class: 9

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Packaging group: III
Marine Pollutant status: Marine pollutant

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

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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
ECl	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.

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

16. Other information

16.1. Indication of changes

Corrected/updated:

Multiple changes due to format update

Review Safety Data Sheet before using product.

16.2. Key or legend to abbreviations and acronyms used in the safety data sheet

ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS = Australian Inventory of Chemical Substances; CAS = Chemical Abstracts Service; CLP = Classification, Labelling, and Packaging; DSL = Canada Domestic Substances List; EC = European Commission; EC50 = Effective Concentration 50%; ECl = Korea Existing Chemicals list; EINECS = European Inventory of Existing Commercial chemical Substances; ELINCS = European List of Notified Chemical Substances; ENCS = Japan Existing and New Chemical Substances; GHS = Globally Harmonized System of Classification and Labelling of Chemicals; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IC50 = Inhibitory Concentration 50%; IECS = China Inventory of Existing Chemical Substances;

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IMDG = International Maritime Dangerous Goods; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; mg/Kg = milligrams per Kilogram; mg/L = milligrams per Liter; mg/m³ = milligrams per Cubic Meter; NDSL = Canada Non-Domestic Substances List; NLP = Europe No Longer Polymers; NZIoC = New Zealand Inventory of Chemicals; PBT = Persistent, Bioaccumulative and Toxic substances; PICCS = Philippines Inventory of Chemicals and Chemical Substances; ppm = parts per million; REACH= Registration, Evaluation and Authorization of Chemicals; RID = European Agreement concerning the International Carriage of Dangerous Goods by Rail; TSCA = Toxic Substances Control Act; vPvB = very Persistent, very Bioaccumulative substances

16.3. Key literature references and sources for data

Available upon request.

16.4. Methods used for classification of mixture according to Regulation (EC) No 1272/2008

The determination of classifications is derived via expert judgment and/or weight of evidence.

16.5. Relevant R- and H-phrases

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R40	Limited evidence of a carcinogenic effect.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.
R50	Very toxic to aquatic organisms.
R68	Possible risk of irreversible effects.

16.6. Training advice

Review Safety Data Sheet before using product.

16.7. Further information

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.
