

Chemical Safety Data Sheet

Z17000000879/Version 1.0

Approval date: 06.04.2010

Print Date: 07.11.2010

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

Product name: KODAK RPJ Developer and Replenisher, Part A

Product code: 8808156, Part A

For Chemical Emergency Information, call: (800) 820-5800

Synonyms: PCD 5955

Product Use: Film or paper manufacturing chemical, For industrial use only.

2. Hazards identification

GHS-Classification

Hazard class	Hazard category	Route of exposure (Target organs)
Acute oral toxicity	Category 5	--
Serious eye damage/eye irritation	Category 2B	--
Germ cell mutagenicity	Category 2	--
Carcinogenicity	Category 2	Oral
Target Organ Systemic Toxicant - Single exposure	Category 3	-- (Target Organs: Central nervous system)
Acute aquatic toxicity	Category 2	--

GHS-Labeling

Contains:

Hydroquinone (123-31-9)

Diethylene glycol (111-46-6)

Symbol(s):



Signal word: Warning

Hazard statements:

May be harmful if swallowed.
Causes eye irritation.
Suspected of causing genetic defects.
Suspected of causing cancer if swallowed.
May cause drowsiness or dizziness.
Toxic to aquatic life.

Precautionary statements:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Use personal protective equipment as required.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local regulation.

3. Composition/information on ingredients

Weight percent	Components (CAS-No.)
15 - 20	Potassium sulphite (10117-38-1)
10 - 15	Hydroquinone (123-31-9)
1 - 5	Diethylene glycol (111-46-6)
1 - 5	Potassium carbonate (584-08-7)
1 - 5	Sodium carbonate (497-19-8)
1 - 5	Potassium bromide (7758-02-3)
0.1 - < 1	Sodium sulphite (7757-83-7)

4. First aid measures

Inhalation: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

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

Ingestion: If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

5. Fire-fighting measures

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fire or excessive heat may produce hazardous decomposition products.

Hazardous Combustion Products: Carbon oxides, Sulphur oxides, (see also Hazardous Decomposition Products section).

Unusual Fire and Explosion Hazards: None.

6. Accidental release measures

Personal precautions:

See Section 8 for recommendations on the use of personal protective equipment.

Methods for 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:

Prevent spillage from entering drains. Contaminated absorbent should be disposed of in accordance with local regulations.

7. Handling and storage

Personal precautions: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with eyes and prolonged or repeated contact with skin. Use only with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials.

Storage: Store in a well-ventilated place. Keep cool. 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	CN OEL	Time Weighted Average (TWA):	1 mg/m3
		Short Term Exposure Limit (STEL):	2 mg/m3
		Time Weighted Average (TWA):	5 mg/m3
Sulphur dioxide		Short Term Exposure Limit (STEL):	10 mg/m3
		Time Weighted Average (TWA):	
		Short Term Exposure Limit (STEL):	
Hydroquinone	ACGIH	time weighted average	1 mg/m3

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

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

Skin and body protection: 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: yellow

Odour: odourless

Specific gravity: 1.305

Vapour pressure: 24 mbar (18.0 mm Hg)

Vapour density: 0.6

Volatile fraction by weight: 60 - 65 %

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

Water solubility: complete

pH: 11.5

Flash point: > 93.3 °C (> 199.9 °F) (estimated)

10. Stability and reactivity

Stability: Stable under normal conditions.

Incompatibility: Acids, Strong oxidizing agents. Contact with strong acids may liberate sulphur dioxide.

Hazardous decomposition products: Sulphur oxides.

Hazardous Polymerization: Hazardous polymerisation does not occur.

11. Toxicological information

Effects of Exposure

General advice: Suspected of causing genetic defects. This mixture contains hydroquinone which is classified as a dermal sensitizer in some jurisdictions. A very similar mixture was

negative in dermal sensitization studies with and without prior sensitization to hydroquinone. Based on the results of these studies, this mixture is not expected to present a dermal sensitization hazard to humans. The following information is based, in part, on an analogy to: PCD 6400 (a very similar material).

Inhalation: May cause drowsiness or dizziness. Some asthmatics or hypersensitive individuals may experience difficulty breathing if exposed to aerosols or decomposition products that are not anticipated during normal use.

Eyes: Causes eye irritation.

Skin: Expected to be a low hazard for recommended handling.

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

Data for PCD 6400 (a very similar material):

Acute Toxicity Data:

Oral LD50 (rat): > 2,000 mg/kg

- Skin irritation: none
- Skin Sensitization: negative

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

Acute Toxicity Data:

Oral LD50 (rat): > 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 (male rat): 400 mg/kg

- Dermal LD50 (guinea pig): > 1,000 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)
- Mouse micronucleus assay: positive
- Sister chromatid exchange (SCE) assay: positive (in presence and absence of activation)
- Chromosomal aberration assay: negative (in absence of activation)
- Mouse lymphoma 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 observable effect level; 4800 mg/kg/day

Developmental Toxicity Data:

- Oral (female rabbit): NOEL for developmental toxicity; 25mg/kg/day
- Oral (females rabbit): NOEL for maternal toxicity; 25mg/kg/day
- Oral (female rat): NOAEL for developmental toxicity; 300mg/kg/day

Data for Diethylene glycol (CAS 111-46-6):**Acute Toxicity Data:**

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

- Dermal LD50 (guinea pig): > 10,000 mg/kg
- Skin irritation: slight to moderate
- Eye irritation: slight

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

Oral LD50 (rat): 5,000 mg/kg

- Inhalation LC50 (mouse): 2,300 mg/l /
- Dermal LD50 (rat): > 2,000 mg/kg
- Skin irritation: slight

Data for Sodium sulphite (CAS 7757-83-7):**Acute Toxicity Data:**

Oral LD50 (rat): > 1,600 mg/kg

- Skin irritation: none
- Eye irritation: slight; washing palliative

12. Ecological information

This product has not been tested for environmental effects.

This preparation has not been tested for environmental effects.

GHS-Classification : Toxic to aquatic life.

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

Potential Toxicity:

Toxicity to daphnia: 1 - 10 mg/l

Persistence and degradability: Readily biodegradable.

13. Disposal considerations

Discharge, treatment, or disposal may be subject to federal, state, commonwealth, provincial, or local laws.

14. Transport information

Not regulated for all modes of transportation.

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

15. Regulatory information

Dangerous Chemicals list -2002 published by China National Security to produce Surveillance administrative Bureau: Listed - Hydroquinone

Notification status

Regulatory List	Notification status
REACH	n (Negative listing)
CH INV	y (positive listing)
TSCA	y (positive listing)
DSL	y (positive listing)
AICS	y (positive listing)
NZIOC	n (Negative listing)
ENCS (JP)	y (positive listing)
ISHL (JP)	y (positive listing)
KECI (KR)	y (positive listing)
PICCS (PH)	y (positive listing)
INV (CN)	y (positive listing)

A N (Negative listing) indicates one or more component is either not on the public Inventory or is subject to exemption requirements. If additional information is needed contact Carestream Health.

16. Other information

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.