# Material Safety Data Sheet



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

**Product name:** KODAK EKTACOLOR SM Processing Unit P1/RA-2SM Version 2.2, Part A

**Product code:** 6601439 - Part A

**Supplier:** KODAK AUSTRALASIA Pty. Ltd., Level 2, 436 Johnston Street, Abbotsford, Victoria, 3067

For Chemical Emergency Information, in Australia call 1800 033111 (24 hour service Australia-wide); in New Zealand call 0800 734 607 (24 hour service); in Asia call +86 21 63500836

For Other Information, call 61 3 8417 8000.

**Synonyms:** PCD 6575

**Product Use:** photographic processing chemical (developer/activator), For industrial use only.

## 2. Hazards identification

**STATEMENT OF HAZARDOUS NATURE:** Hazardous according to criteria of Australian Safety and Compensation Council

**Corrosive.** Causes burns. Harmful if swallowed. May cause sensitization by skin contact.

**Poisons Schedule:** 5, 6
**Contains:** Potassium carbonate, Potassium hydroxide

## 3. Composition/information on ingredients

| Weight percent | Components (CAS-No.) |
|---|---|
| 45 - 50 | Diethylene glycol (111-46-6) |
| 10 - 15 | Potassium carbonate (584-08-7) |
| 1 - 5 | 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine (92-09-1) |
| 1 - 5 | N,N-diethylhydroxylamine (3710-84-7) |
| 1 - <5 | Potassium hydroxide (1310-58-3) |
| 0.1 - <0.5 | Sodium hydroxide (1310-73-2) |

## 4. First aid measures

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

**Eyes:** Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control centre immediately. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

**Ingestion:** If swallowed, do NOT induce vomiting. Give victim a glass of water. Never give anything by mouth to an unconscious person. Urgent hospital treatment is likely to be needed.

**Notes to physician:**

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

## 5. Fire-fighting measures

**Hazchem Code:** 2R

**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, nitrogen oxides (NOx), (see also Hazardous Decomposition Products sections.)

**Unusual Fire and Explosion Hazards:** None.

## 6. Accidental release measures

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Contaminated absorbent should be disposed of in accordance with local regulations. Clean surface thoroughly to remove residual contamination.

## 7. Handling and storage

**Personal precautions:** Avoid breathing mist or vapour at concentrations greater than the exposure limits. Do not get in eyes, on skin, or on 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:** Keep from contact with oxidizing materials.

**Storage:** 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 |
|---|---|---|---|
| Diethylene glycol | Exposure Standards | time weighted average | 23 ppm 100 mg/m3 |
| Potassium hydroxide | | Peak | 2 mg/m3 |
| Diethylene glycol | New Zealand | time weighted average | 23 ppm 101 mg/m3 |
| Potassium hydroxide | | Ceiling Limit Value | 2 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:** None should be needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: organic vapour/P95. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

**Eye protection:** Wear safety glasses with side shields (or goggles) and a face shield.

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

## 9. Physical and chemical properties

**Physical form:** liquid

**Colour:** clear orange

**Odour:** lemon

**Specific gravity:** 1.2289

**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) (estimated)

**Water solubility:** completely soluble

**pH:** 13.7

**Flash point:** > 93.33 °C (> 200.0 °F) (estimated)

**Flammability Limits:** Not specified

## 10. Stability and reactivity

**Stability:** Stable under normal conditions.

**Incompatibility:** Strong oxidizing agents, Acids, Metals

**Hazardous decomposition products:** nitrogen oxides (NOx).

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

## 11. Toxicological information

### Effects of Exposure

**General advice:**

Contains: Diethylene glycol. Can cause kidney damage and CNS effects following ingestion. Repeated oral exposure to high doses can cause liver damage.

Contains: 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine. May

cause kidney damage based on animal data.

Contains: Sodium hydroxide. The following exposure effects are based on pH of the solution, concentration of the base, and a review of the literature.

**Inhalation:** Expected to be a low hazard for recommended handling.

**Eyes:** Causes burns.

**Skin:** Causes burns. May cause sensitization by skin contact.

**Ingestion:** Harmful if swallowed.

### Data for Diethylene glycol (CAS 111-46-6):

### Acute Toxicity Data:
Oral LD50 (rat): 12,565 mg/kg
- Inhalation LC50 (rat): > 5.08 mg/l / 4 hr
- Dermal LD50 (rabbit): 11,890 mg/kg
- Skin irritation: slight to moderate
- Eye irritation: mild

### Mutagenicity/Genotoxicity Data:
Ames test: negative (in presence and absence of activation)

### Data for Potassium carbonate (CAS 584-08-7):

### Acute Toxicity Data:
Oral LD50 (rat): 1,870 mg/kg

### Data for 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine (CAS 92-09-1):

### Acute Toxicity Data:
Oral LD50 (rat): 200 mg/kg
- Skin Sensitization (guinea pig): moderate (Causes sensitization on guinea-pigs.)

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.

### Carcinogenicity:
- Dermal study (mouse, 2 years): NOEL; 62 mg/kg/day (only dose tested)

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

### Acute Toxicity Data:
Oral LD50 (rat): 273 mg/kg
- Skin irritation: severe

### Data for N,N-diethylhydroxylamine (CAS 3710-84-7):

### Acute Toxicity Data:
Oral LD50 (rat): 2,190 mg/kg
- Inhalation LC50 (rat): 3140 ppm / 4 hr

- Dermal LD50 (rabbit): 1,300 mg/kg
- Skin irritation: severe
- Skin Sensitization (guinea pig): negative
- Eye irritation (unwashed eyes): moderate

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:

- Inhalation (28-day, male and female rat): NOAEL; 150 ppm/6 hours/day

### Data for Sodium hydroxide (CAS 1310-73-2):

### Acute Toxicity Data:

Oral LD50 (rat): 50 - 400 mg/kg

- Dermal LD50 (rabbit): 1,350 mg/kg
- Skin irritation: Severe skin irritation
- Eye irritation: severe

## 12. Ecological information

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

**Potential Toxicity:**

| | |
|---|---|
| Toxicity to fish (LC50): | 1 - 10 mg/l |
| Toxicity to daphnia (EC50): | 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. Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 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.

| | | |
|---|---|---|
| **ADG:** | UN number: | UN1814 |
| | Proper shipping name: | POTASSIUM HYDROXIDE SOLUTION |
| | Class: | 8 |
| | Packaging group: | II |
| **IATA:** | UN number: | UN1814 |
| | Proper shipping name: | POTASSIUM HYDROXIDE SOLUTION |
| | Class: | 8 |
| | Packaging group: | II |

| | | |
|---|---|---|
| **IMDG:** | UN number: | UN1814 |
| | Proper shipping name: | POTASSIUM HYDROXIDE SOLUTION |
| | Class: | 8 |
| | Packaging group: | II |

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 | Listed |
| EINECS | Not all listed |
| ELINCS | None listed |
| NLP | None listed |
| AICS | Not all listed |
| AICS | Not all listed |
| IECS | Not all listed |
| ENCS | 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.

**Poisons Schedule:** 5, 6

**Australian Safety and Compensation Council:** none

**Other regulations**

| | |
|---|---|
| Australia National Model Regulations for the Control of Scheduled Carcinogenic Substances | No components listed |

## 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. The actual label information will depend upon the intended use of the product. Australian Safety and Compensation Council labeling appears for commercial/industrial use.

**Australian Safety and Compensation Council Labeling:**

**Contains:** Diethylene glycol 45 - 50%, 4-(N-ethyl-N-2-methanesulphonylaminoethyl)-2-methylphenylenediamine 1 - 5%, Potassium hydroxide 1 - <5%

**pH:** > 12

| | |
|---|---|
| **Symbol/Indication of Danger:** | C: Corrosive |
| **Risk Phrases:** | R34: Causes burns.<br>R22: Harmful if swallowed.<br>R43: May cause sensitization by skin contact. |
| **Safety Phrases:** | S24: Avoid contact with skin.<br>S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.<br>S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |

**National Health and Medical Research Council Standard for the Uniform Scheduling of Drugs and Poisons Labeling:**

**POISON**
**KEEP OUT OF REACH OF CHILDREN**
**DO NOT SWALLOW**
**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

**Contains:** Potassium carbonate (173.7665 g/L), Potassium hydroxide (24.08644 g/L)

**Warning:** Corrosive. Strongly alkaline. May produce severe burns. Attacks skin and eyes.

**Safety Phrases:** Avoid contact with skin or eyes. Wear eye protection when mixing or using. Wear protective gloves when mixing or using.

**First aid:** For advice, contact a Poisons Information Centre (Australia 13 1126; New Zealand 0800 764 766) or a doctor. If swallowed, do NOT induce vomiting. If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

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-1, C-0