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Material Safety Data Sheets

KODAK Developer D-76

MATERIAL SAFETY DATA SHEET

000001545/F/AUS

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Supersedes MSDS No. 000001545 dated 08.06.2001

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: KODAK Developer D-76

Catalog Number(s): 146 4791 - To Make .95 litres
 827 5497 - To Make 1 litre
 146 4817 - To Make 3.8 litres
 146 4825 - To Make 38 litres

Manufacturer: EASTMAN KODAK COMPANY, Rochester, New York 14650

Supplier: KODAK AUSTRALASIA Pty. Ltd., 173 Elizabeth Street, Coburg, Victoria
3058, AUSTRALIAFor Chemical Emergency Information, in Australia call 1800 033111 (24 hour
service Australia-wide); in New Zealand call 0800 734 607 (24 hour service)

For Other Information, call 61 3 9353 2222

Synonym(s): PCD 5239

Product Use: Black and white film photographic processing solution

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

Concentrate:

85-90 Sodium sulphite (007757-83-7)
1-5 Hydroquinone (000123-31-9)
1-5 Sodium tetraborate, pentahydrate (012179-04-3)
1-5 4-(methylamino)phenol sulfates (000055-55-0)
• 1 Boric anhydride (001303-86-2)

Working solution:

85-90 Water (007732-18-5)
5-10 Sodium sulphite (007757-83-7)
1-5 Sodium tetraborate, pentahydrate (012179-04-3)
• 1 Hydroquinone (000123-31-9)
• 1 4-(methylamino)phenol sulfates (000055-55-0)

3. HAZARDS IDENTIFICATION

Concentrate:

STATEMENT OF HAZARDOUS NATURE: Hazardous according to criteria of Worksafe Australia

HARMFUL, Possible risk of irreversible effects. May cause sensitization by skin contact.

Contains no scheduled poisons

Working solution:

STATEMENT OF HAZARDOUS NATURE: Not classified as hazardous according to criteria of Worksafe Australia

Contains no scheduled poisons

4. FIRST-AID MEASURES

Inhalation; If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: Immediately flush with plenty of water for at least 15 minutes and wash using soap. Remove contaminated clothing and shoes. If skin irritation or an allergic skin reaction develops, get medical attention.

Ingestion: Drink 1-2 glasses of water. Seek medical attention. Never give anything by mouth to an unconscious person.

First Aid Facilities: Not specified

Note to Physicians: Absorption of this material into the body leads to the formation of methemoglobin that, in sufficient concentration, causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body, including scalp and nails, is of utmost importance. If cyanosis is severe, intravenous injection of methylene blue, one milligram per kilogram of body weight, may be of value.

5. FIRE FIGHTING MEASURES

Hazchem Code: Not specified

Extinguishing Media: Use appropriate agent for adjacent fire.

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

Special Exposure Hazards: Fire or excessive heat may produce hazardous decomposition products (see also Stability and Reactivity section).

Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures.

6. ACCIDENTAL RELEASE MEASURES

<http://www.kodak.com/cgi-bin/webCatalog.pl?cc=>

AU&lc=en&product=KODAK+Developer+D-76

Sweep up and place in a container for chemical waste. Avoid generating dust. Clean surface thoroughly to remove residual contamination. Otherwise, absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing dust or vapour. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

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

Storage: Keep container closed. Keep away from incompatible substances (see Incompatibility section).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards:

ACGIH Threshold Limit Value (TLV):

Boric anhydride: 10 mg/m³ TWA

Hydroquinone: 2 mg/m³ TWA

Sodium tetraborate, pentahydrate: 1 mg/m³ TWA

WORKSAFE AUSTRALIA National Exposure Standards:

Boric anhydride: 10 mg/m³ TWA

Hydroquinone: 2 mg/m³ TWA

Sodium tetraborate, pentahydrate: 1 mg/m³ TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure standards.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: Dust. 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 WORKSAFE AUSTRALIA standard AS/NZS 1716 : 1994.

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

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

	Concentrate	Working solution
Physical Form:	solid	liquid

<http://www.kodak.com/cgi-bin/webCatalog.pl?cc=AU&lc=en&product=KODAK+Developer+D-76>

Color:	off-white	colorless
Odor:	odorless	slight
Specific Gravity (water = 1)	not available	1.08-1.09
Vapour Pressure at 20°C (68°F):	negligible	24 mbar (18 mm Hg)
Vapour Density (Air = 1):	not applicable	0.6
Volatile Fraction by Weight:	negligible	85-90%
Boiling Point:	not applicable	>100°C (>212°F)
Solubility in Water:	appreciable	complete
pH:	not applicable	8.5
Flash Point:	not applicable, noncombustible solid	none
Flammability Limits:	not specified	not specified

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Contact with strong acids may liberate sulphur dioxide.

Hazardous Decomposition Products: Oxides of sulphur

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General: Contains hydroquinone. Possible risk of irreversible effects.

Inhalation:

Concentrate: Airborne dust irritating. Some asthmatics or hypersensitive individuals may experience difficult breathing.

Working solution: Expected to be a low hazard for recommended handling.

Eyes:

Concentrate: Airborne dust irritating. May cause irritation.

Working solution: May cause irritation.

Skin:

Concentrate: May cause sensitization by skin contact. May cause allergic skin reaction based on human experience. May cause skin depigmentation.

Working solution: May cause allergic skin reaction based on human