

Material Safety Data Sheet

Printing date 01/17/2008

Reviewed on 06/21/2007

1 Identification of substance:

- **Product details:**
- **Trade name:** Image Development Reagent
- **Catalog or product number:** 1610464, 1610464EDU
- **Application of the substance / the preparation** Laboratory chemicals
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 16.
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

CAS: 50-00-0	formaldehyde	Carc. Cat. 3; T, C; R 23/24/25-34-40-43	2.5-5%
EINECS: 200-001-8			
RTECS: LP 8925000			

3 Hazards identification

- **Emergency overview:**
Irritant to skin.
Sensitizer by dermal contact.
Irritant to respiratory system and skin.
Xn Harmful
- **Routes of exposure:** Skin
- **Information pertaining to particular dangers for man and environment**
R 40 Limited evidence of a carcinogenic effect.
R 43 May cause sensitization by skin contact.
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **After inhalation**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 2)

Material Safety Data Sheet

Printing date 01/17/2008

Reviewed on 06/21/2007

Trade name: Image Development Reagent

(Contd. of page 1)

- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**
- **Information for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**

50-00-0 formaldehyde

PEL ()	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048
REL ()	Short-term value: C 0.1* ppm Long-term value: 0.016 ppm *15-min
TLV ()	Short-term value: C 0.37 mg/m ³ , C 0.3 ppm SEN

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 01/17/2008

Reviewed on 06/21/2007

Trade name: Image Development Reagent

(Contd. of page 2)

- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves:** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9 Physical and chemical properties:

· **General Information**

Form: liquid
Color: Colorless
Odor: Odorless

· **Change in condition**

Melting point/Melting range: 0°C
Boiling point/Boiling range: 100°C

· **Flash point:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapor pressure at 20°C:** 23 hPa

· **Density at 20°C:** 1 g/cm³

· **Solubility in / Miscibility with**

Water: Fully miscible
Organic solvents: 2.8 %
Water: 97.2 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**

50-00-0 formaldehyde

Oral LD50 >200 mg/kg (rat)

· **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Target organs:** Skin.

Material Safety Data Sheet

Printing date 01/17/2008

Reviewed on 06/21/2007

Trade name: Image Development Reagent

(Contd. of page 3)

12 Ecological information:

· General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

· Product:

· Recommendation

Hand over to hazardous waste disposers.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

· DOT regulations:

· Hazard class: -

· Land transport ADR/RID (cross-border)

· ADR/RID class: -

· Maritime transport IMDG:

· IMDG Class: -

· Marine pollutant: No

· Air transport ICAO-TI and IATA-DGR:

· ICAO/IATA Class: -

15 Regulations

· SARA (Superfund Amendants and Reauthorization Act of 1986 - USA)

· Section 302/304 (40CFR355.30 / 40CFR355.40):

50-00-0 formaldehyde

· Section 313 (40CFR372.65):

50-00-0 formaldehyde

· TSCA (Toxic Substances Control Act):

Substance is listed.

· California Proposition 65:

· Chemicals known to cause cancer:

50-00-0 formaldehyde

· Cancerogenity categories

· EPA (Environmental Protection Agency)

Substance is not listed.

(Contd. on page 5)

Material Safety Data Sheet

Printing date 01/17/2008

Reviewed on 06/21/2007

Trade name: Image Development Reagent

(Contd. of page 4)

· **IARC (International Agency for Research on Cancer)**

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· **NTP (National Toxicology Program)**

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· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **MAK (German Maximum Workplace Concentration)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xn Harmful

· **Risk phrases:**

- 40 Limited evidence of a carcinogenic effect.
- 43 May cause sensitization by skin contact.

· **Safety phrases:**

- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately.
- 51 Use only in well-ventilated areas.
- 60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

Class	Share in %
I	2.5-5

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· *** Data compared to the previous version altered.**