

Safety Data Sheet

acc. to OSHA HCS



Printing date 03/31/2016

Reviewed on 03/31/2016

1 Identification

- **Product identifier**
- **Trade name:** Image Development Reagent
- **Catalog or product number:** 1610464, 1610464EDU
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:**
Technical services, customer support
lsg_techserv_us@bio-rad.com
- **Emergency telephone number:**
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 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Sens. 1 H317 May cause an allergic skin reaction.
Muta. 2 H341 Suspected of causing genetic defects.
Carc. 1B H350 May cause cancer.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
 
GHS07 GHS08
- **Signal word** Danger
- **Hazard-determining components of labeling:**
formaldehyde
- **Hazard statements**
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves.
P363 Wash contaminated clothing before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/31/2016

Reviewed on 03/31/2016

Trade name: Image Development Reagent

(Contd. of page 1)

· **Additional information:** Contact with acids may cause release of toxic gases

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

Listing of dangerous and non-hazardous components:

50-00-0	formaldehyde	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 Muta. 2, H341; Carc. 1B, H350 Skin Corr. 1B, H314 Skin Sens. 1, H317	2.5-5%
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· **Additional information** For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

- **Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire-fighting measures

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

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/31/2016

Reviewed on 03/31/2016

Trade name: Image Development Reagent

See Section 13 for disposal information.

(Contd. of page 2)

7 Handling and storage

- **Handling**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **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(c)
REL ()	Short-term value: C 0.1* ppm Long-term value: 0.016 ppm *15-min; See Pocket Guide App. A
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.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **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

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
Form: Liquid

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/31/2016

Reviewed on 03/31/2016

Trade name: Image Development Reagent

(Contd. of page 3)

Color:	Colorless
· Odor:	Odorless
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	0 °C
Boiling point/Boiling range:	undetermined
· Flash point:	Not applicable
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C:	23 hPa
· Density at 20 °C:	0.99347 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	2.8 %
Water:	97.2 %

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Hazardous decomposition products:** No dangerous decomposition products known

Safety Data Sheet
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Printing date 03/31/2016

Reviewed on 03/31/2016

Trade name: Image Development Reagent

(Contd. of page 4)

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

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

50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
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- Primary irritant effect:
- on the skin: No irritant effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

50-00-0	formaldehyde	1
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· NTP (National Toxicology Program)

50-00-0	formaldehyde	K
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· OSHA-Ca (Occupational Safety & Health Administration)

50-00-0	formaldehyde	
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12 Ecological information

- Additional 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

- Waste treatment methods
- 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

- UN-Number
- DOT, ADR, ADN, IMDG, IATA Void

- UN proper shipping name
- DOT, ADR, ADN, IMDG, IATA Void

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/31/2016

Reviewed on 03/31/2016

Trade name: Image Development Reagent

(Contd. of page 5)

· **Transport hazard class(es)**
· **DOT, ADR, ADN, IMDG, IATA**
· **Class** Void

· **Packing group**
· **DOT, ADR, IMDG, IATA** Void

· **Environmental hazards:**
· **Marine pollutant:** No

· **UN "Model Regulation":** Void

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **SARA (Superfund Amendments 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):**

All ingredients are listed.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

50-00-0 formaldehyde

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

50-00-0 formaldehyde

B1

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

50-00-0 formaldehyde

A2

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

50-00-0 formaldehyde

4

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

50-00-0 formaldehyde

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	2.5-5

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

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

Safety Data Sheet

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Printing date 03/31/2016

Reviewed on 03/31/2016

Trade name: Image Development Reagent

(Contd. of page 6)

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 SDS:** 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

· **Date of preparation / last revision** 03/31/2016 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 1B: Carcinogenicity, Hazard Category 1B

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