

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 03/31/2016

Reviewed on 05/22/2015


**1 Identification**

- **Product identifier**
- **Trade name:** Image Developer Concentrate
- **Catalog or product number:** 1610472, 10040416
- **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**  
Acute Tox. 4 H302 Harmful if swallowed.  
Acute Tox. 3 H311 Toxic in contact with skin.  
Acute Tox. 3 H331 Toxic if inhaled.  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.  
Muta. 2 H341 Suspected of causing genetic defects.  
Carc. 1B H350 May cause cancer.

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- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**  


GHS05 GHS06 GHS08
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
formaldehyde
- **Hazard statements**  
H302 Harmful if swallowed.  
H311+H331 Toxic in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.
- **Precautionary statements**  
P260 Do not breathe dusts or mists.

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P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**3 Composition/information on ingredients**

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with non-hazardous additions.

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

7732-18-5	water		50-100%
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	35-50%

· **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.

· **Information for doctor**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**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.

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

**6 Accidental release measures**

· **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

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- **Environmental precautions:** 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.  
See Section 13 for disposal information.

**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.
- **Specific end use(s)** No further relevant information available.

**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
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 <sup>3</sup> , 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.

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· **Eye protection:** *Safety glasses*

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	<i>Liquid</i>
· <b>Color:</b>	<i>Colorless</i>
· <b>Odor:</b>	<i>Recognizable</i>
· <b>Odor threshold:</b>	<i>Not determined.</i>

· **pH-value:** *Not determined.*

· **Change in condition**

· <b>Melting point/Melting range:</b>	<i>undetermined</i>
· <b>Boiling point/Boiling range:</b>	<i>undetermined</i>

· **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:**

· <b>Lower:</b>	<i>7.0 Vol %</i>
· <b>Upper:</b>	<i>73.0 Vol %</i>

· **Vapor pressure at 20 °C:** *23 hPa*

· **Density at 20 °C:** *0.92014 g/cm<sup>3</sup>*

· **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:**

· <b>dynamic:</b>	<i>Not determined.</i>
· <b>kinematic:</b>	<i>Not determined.</i>

· **Solvent content:**

· <b>Organic solvents:</b>	<i>37.0 %</i>
· <b>Water:</b>	<i>63.0 %</i>

· **Other information** *No further relevant information available.*

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**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

**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:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

· **Carcinogenic categories**

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

50-00-0	formaldehyde	2A
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· **NTP (National Toxicology Program)**

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

None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· <b>UN-Number</b>	
· <b>DOT</b>	UN2209
· <b>ADR, IMDG, IATA</b>	2209
· <b>UN proper shipping name</b>	
· <b>ADR</b>	2209 FORMALDEHYDE SOLUTION
· <b>IMDG</b>	FORMALDEHYDE SOLUTION
· <b>IATA</b>	FORMALDEHYDE SOLUTION (with not less than 25% formaldehyde)
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, IMDG, IATA</b>	
· <b>Class</b>	8 Corrosive substances
· <b>Label</b>	8
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Danger code (Kemler):</b>	80
· <b>EMS Number:</b>	F-A,S-B
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	UN2209; FORMALDEHYDE SOLUTION; 8; III

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**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- 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):**

All ingredients are listed.

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

50-00-0 formaldehyde

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

- **National regulations**

- **Technical instructions (air):**

Class	Share in %
I	35-50

- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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

**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)

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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  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
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.**