

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

Printing date 02/13/2017

Reviewed on 02/10/2017

## 1 Identification

- **Product identifier**
- **Trade name:** Homocysteine by HPLC, MP
- **Article number:** 1954077
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Flammable Liquids - Category 4 H227 Combustible liquid.  
Specific Target Organ Toxicity - Single Exposure - H371 May cause damage to organs.  
Category 2

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



GHS08

- **Signal word** *Warning*
- **Hazard-determining components of labeling:**  
*methanol*
- **Hazard statements**  
*Combustible liquid.*  
*May cause damage to organs.*
- **Precautionary statements**  
*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*  
*Do not breathe dust/fume/gas/mist/vapours/spray.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*Store locked up.*  
*Store in a well-ventilated place.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Hazard description:**
- **WHMIS-symbols:**  
*B3 - Combustible liquid*

(Contd. on page 2)

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(Contd. of page 1)

D2B - Toxic material causing other toxic effects



- Classification system:
- NFPA ratings (scale 0 - 4)



Health = 2  
Fire = 2  
Reactivity = 0

- HMIS-ratings (scale 0 - 4)



Health = \*2  
Fire = 2  
Reactivity = 0

## 3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

### · Dangerous components:

67-56-1	methanol	3-5% w/w
	⚠ Flammable Liquids - Category 2, H225; ⚠ Acute Toxicity (Oral) - Category 3, H301; Acute Toxicity (Dermal) - Category 3, H311; Acute Toxicity (Inhalation) - Category 3, H331; ⚠ Specific Target Organ Toxicity - Single Exposure - Category 1, H370	

## 4 First-aid measures

- Description of first aid measures
- General information:  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: Immediately call a doctor.
- 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.

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(Contd. on page 3)

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(Contd. of page 2)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
Carbon monoxide (CO)  
In case of fire, the following can be released:  
Sulphur dioxide (SO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **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:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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.

(Contd. on page 4)

## Safety Data Sheet

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Printing date 02/13/2017

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Trade name: Homocysteine by HPLC, MP

(Contd. of page 3)

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**67-56-1 methanol**

EL	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Color: Colorless

· **Odor:** Weak, characteristic

· **Odor threshold:** Not determined.

(Contd. on page 5)

**Safety Data Sheet**  
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(Contd. of page 4)

· <b>pH-value at 20 °C:</b>	4,5
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C
· <b>Flash point:</b>	65 °C
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Not determined.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Other information</b>	No further relevant information available.

**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** Reacts with oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
Carbon monoxide and carbon dioxide  
Possible in traces.  
Sulfur dioxide  
Nitrogen oxides

CA

(Contd. on page 6)

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(Contd. of page 5)

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful
- **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

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 1 (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

(Contd. on page 7)

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(Contd. of page 6)

**14 Transport information**

· UN-Number	
· DOT, TDG, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, TDG, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, TDG, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, TDG, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

67-56-1 methanol

· TSCA (Toxic Substances Control Act):

67-56-1	methanol
77-92-9	citric acid
64-19-7	acetic acid
5324-84-5	sodium octane-1-sulphonate monohydrate
111-92-2	di-n-butylamine
7732-18-5	water, distilled, conductivity or of similar purity

· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

67-56-1	methanol
77-92-9	citric acid
64-19-7	acetic acid
5324-84-5	sodium octane-1-sulphonate monohydrate
111-92-2	di-n-butylamine
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)
7732-18-5	water, distilled, conductivity or of similar purity

(Contd. on page 8)

## Safety Data Sheet

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(Contd. of page 7)

· <b>Canadian Ingredient Disclosure list (limit 0.1%)</b>
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None of the ingredients is listed.
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· <b>Canadian Ingredient Disclosure list (limit 1%)</b>
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67-56-1   methanol
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· <b>GHS label elements</b>
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The product is classified and labeled according to the Globally Harmonized System (GHS).
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· <b>Hazard pictograms</b>
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GHS08

· <b>Signal word</b> Warning
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· <b>Hazard-determining components of labeling:</b>
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methanol
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· <b>Hazard statements</b>
----------------------------

Combustible liquid.
---------------------

May cause damage to organs.
-----------------------------

· <b>Precautionary statements</b>
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Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
--

Do not breathe dust/fume/gas/mist/vapours/spray.
--

Wear protective gloves/protective clothing/eye protection/face protection.
--

Store locked up.
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Store in a well-ventilated place.
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Dispose of contents/container in accordance with local/regional/national/international regulations.
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· <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.
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### 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.

· <b>Department issuing SDS:</b>
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Bio-Rad Laboratories GmbH
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Heidemannstrasse 164
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D-80939 Munich
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· <b>Contact:</b>
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Technical Support:
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E-Mail: cts-ce@bio-rad.com
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· <b>Abbreviations and acronyms:</b>
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IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
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ICAO: International Civil Aviation Organisation
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ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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IMDG: International Maritime Code for Dangerous Goods
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DOT: US Department of Transportation
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IATA: International Air Transport Association
---

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)
---

NFPA: National Fire Protection Association (USA)
--

HMIS: Hazardous Materials Identification System (USA)
---

WHMIS: Workplace Hazardous Materials Information System (Canada)
--

PBT: Persistent, Bioaccumulative and Toxic
--

vPvB: very Persistent and very Bioaccumulative
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· <b>* Data compared to the previous version altered.</b>
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