

## Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

**1 Identification of substance:**

- **Product details:**
- **Trade name:** Liquichek™ Whole Blood Volatiles Control
- **Catalog or product number:** Level 2
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
9500 Jeronimo Road  
Irvine, California 92618-2017
- 1(949) 598-1200
- **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.

**2 Composition/Information on components:**

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

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

	Human Red Cells	50-100%
7732-18-5	water	35-50%
	Proprietary Reagent KS	2.5-5%

- **Additional information** Contains human sourced and/or potentially infectious components.

**3 Hazards identification**

- **Emergency overview:** not applicable
- **Routes of exposure:**  
Ingestion  
Inhalation  
Skin
- **Information pertaining to particular dangers for man and environment**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**  
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0-4)**  
Health = 0  
Fire = 0  
Reactivity = 0
- **Special Hazards** Contains human sourced and/or potentially infectious components.

**4 First aid measures**

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**  
Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 2)

QUS

**Material Safety Data Sheet**

Printing date 03/17/2010

Reviewed on 03/11/2010

**Trade name: Liquichek™ Whole Blood Volatiles Control**

(Contd. of page 1)

Generally the product does not irritate the skin.

- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**
- **The following symptoms may occur:**  
 Skin irritation  
 Eye irritation

**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:** Handle as potentially infectious.
- **Measures for environmental protection:**  
 Keep contaminated washing water and dispose of appropriately.  
 Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
 Absorb liquid components with liquid-binding material.  
 Pick up mechanically.  
 Clean the affected area carefully; suitable cleaners are:  
 Disinfectant  
 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:**  
 Refer to package insert for additional information regarding storage conditions.

**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:**

**64-17-5 ethanol**

PEL (United States)	1900 mg/m <sup>3</sup> , 1000 ppm
REL (United States)	1900 mg/m <sup>3</sup> , 1000 ppm
TLV (United States)	1880 mg/m <sup>3</sup> , 1000 ppm

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 03/17/2010

Reviewed on 03/11/2010

**Trade name: Liquichek™ Whole Blood Volatiles Control**

(Contd. of page 2)

**67-56-1 methanol**

PEL (United States)	260 mg/m <sup>3</sup> , 200 ppm
REL (United States)	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm
TLV (United States)	Skin Short-term value: 328 mg/m <sup>3</sup> , 250 ppm Long-term value: 262 mg/m <sup>3</sup> , 200 ppm Skin; BEI

**67-63-0 propan-2-ol**

PEL (United States)	980 mg/m <sup>3</sup> , 400 ppm
REL (United States)	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV (United States)	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 200 ppm BEI

**67-64-1 acetone**

PEL (United States)	2400 mg/m <sup>3</sup> , 1000 ppm
REL (United States)	590 mg/m <sup>3</sup> , 250 ppm
TLV (United States)	Short-term value: 1782 mg/m <sup>3</sup> , 750 ppm Long-term value: 1188 mg/m <sup>3</sup> , 500 ppm BEI

**Proprietary Reagent KB**

WEEL (United States)	0.5 mg/m <sup>3</sup>
----------------------	-----------------------

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

· **Personal protective equipment**

· **General protective and hygienic measures**

Follow the usual biosafety practices for handling potentially infectious materials.

The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** Not required.

· **Protection of hands:** Protective gloves.

· **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.

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

· **Body protection:** Protective work clothing.

**9 Physical and chemical properties:**

· **General Information**

<b>Form:</b>	Liquid
<b>Color:</b>	Red
<b>Odor:</b>	Odorless

(Contd. on page 4)

**Material Safety Data Sheet**

Printing date 03/17/2010

Reviewed on 03/11/2010

**Trade name: Liquichek™ Whole Blood Volatiles Control**

(Contd. of page 3)

- **Change in condition**  
*Melting point/Melting range: undetermined*  
*Boiling point/Boiling range: undetermined*
- **Flash point:** *Not applicable*
- **Auto igniting:** *Product is not selfigniting.*
- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Density:** *Not determined*
- **Solubility in / Miscibility with Water:** *Fully miscible*
- **pH-value at 20°C:** *7.1-7.3*
- **Solvent content:**  
*Organic solvents: 0.4 %*  
*Water: 35-50 %*
- **Solids content:** *58.6 %*

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Materials to be avoided:**
- **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:**

**67-56-1 methanol**

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritant effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**  
*The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:*  
*When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.*

QUS  
 (Contd. on page 5)

**Material Safety Data Sheet**

Printing date 03/17/2010

Reviewed on 03/11/2010

**Trade name: Liquichek™ Whole Blood Volatiles Control**

(Contd. of page 4)

**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**

- **Product:**
- **Recommendation** *Dispose of waste in accordance to applicable national, regional, or local regulations.*
- **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:** -
- **Transport/Additional information:** *Not dangerous according to the above specifications.*

**15 Regulations**

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

*None of the ingredients is listed.*

- **Section 313 (40CFR372.65):**

67-56-1 | methanol

67-63-0 | propan-2-ol

- **TSCA (Toxic Substances Control Act):**

7732-18-5 | water

7647-14-5 | sodium chloride

64-17-5 | ethanol

67-56-1 | methanol

67-63-0 | propan-2-ol

(Contd. on page 6)

**Material Safety Data Sheet**

Printing date 03/17/2010

Reviewed on 03/11/2010

**Trade name: Liquichek™ Whole Blood Volatiles Control**

(Contd. of page 5)

67-64-1	acetone	
· <b>California Proposition 65:</b>		
· <b>Chemicals known to cause cancer:</b>		
	Proprietary Reagent KB	
7758-95-4	lead dichloride	
· <b>Developmental Toxicity</b>		
64-17-5	ethanol	
· <b>Carcinogenic categories</b>		
· <b>EPA (Environmental Protection Agency)</b>		
67-64-1	acetone	D
· <b>IARC (International Agency for Research on Cancer)</b>		
67-63-0	propan-2-ol	3
	Proprietary Reagent KB	2A
7758-95-4	lead dichloride	2B
· <b>NTP (National Toxicology Program)</b>		
	Proprietary Reagent KB	R
· <b>TLV (Threshold Limit Value established by ACGIH)</b>		
64-17-5	ethanol	A4
67-64-1	acetone	A4
· <b>MAK (German Maximum Workplace Concentration)</b>		
64-17-5	ethanol	5
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
None of the ingredients is listed.		
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals  
 The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **Safety phrases:**

35 This material and its container must be disposed of in a safe way.

· **National regulations**

· **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:**

(Contd. on page 7)

**Material Safety Data Sheet**

Printing date 03/17/2010

Reviewed on 03/11/2010

**Trade name: Liquichek™ Whole Blood Volatiles Control**

(Contd. of page 6)

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.**

QUS