

## Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

**1 Identification of substance:**

- **Product details:**
- **Trade name:** Reagent H
- **Catalog or product number:** 194-5361H, 194-5383
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547  
1(510)724-7000
- **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:**
- **CAS No. Description:**  
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

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

7732-18-5	water		35-50%
872-50-4	N-methyl-2-pyrrolidone	Xi; R 36/38	10-20%
111-46-6	2,2'-oxybisethanol	Xn; R 22	10-20%
108-32-7	propylene carbonate	Xi; R 36	5-10%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

- **Emergency overview:**  
Irritant to eyes.  
Irritant to skin.  
Irritant to respiratory system and skin.  
Xi Irritant
- **Routes of exposure:** Skin
- **Information pertaining to particular dangers for man and environment**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
R 36/38 Irritating to eyes and skin.
- **Classification system**  
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

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· **NFPA ratings (scale 0-4)**

Health = 1

Fire = 0

Reactivity = 0

**4 First aid measures**

- **General information** Seek immediate medical advice.
- **After inhalation** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact**  
Immediately wash with water and soap and rinse thoroughly.  
Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**  
· **The following symptoms may occur:**  
Eye irritation  
Skin irritation

**5 Fire fighting measures**

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Wear fully protective suit.

**6 Accidental release measures**

- **Person-related safety precautions:** Wear protective clothing.
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**  
Dispose of the collected material according to regulations.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**7 Handling and storage**

- **Handling**
- **Information for safe handling:**  
No special measures required.  
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:** Keep receptacle tightly sealed.

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**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:**

**872-50-4 N-methyl-2-pyrrolidone**

WEEL (United States)	10 ppm
	Skin

**111-46-6 2,2'-oxybisethanol**

WEEL (United States)	10 mg/m <sup>3</sup>
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· **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.

Avoid contact with the eyes and skin.

· **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

Tightly sealed goggles.

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

**9 Physical and chemical properties:**

· **General Information**

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

· **Change in condition**

**Melting point/Melting range:** 0°C

**Boiling point/Boiling range:** 100°C

· **Flash point:** Not applicable

· **Ignition temperature:** 225°C

· **Auto igniting:** Product is not selfigniting.

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

· **Explosion limits:**

**Lower:** 0.7 Vol %

**Upper:** 22.0 Vol %

· **Vapor pressure at 20°C:** 23 hPa

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· **Density at 20°C:** 0.999 g/cm<sup>3</sup>

· **Solubility in / Miscibility with Water:** Fully miscible

· **Solvent content:**  
**Organic solvents:** 49.7 %  
**Water:** 40.0 %

**Solids content:** 0.7 %

**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:**

**872-50-4 N-methyl-2-pyrrolidone**

Oral LD50 3600 mg/kg (rat)

Dermal LD50 8000 mg/kg (rbt)

**111-46-6 2,2'-oxybisethanol**

Oral LD50 12565 mg/kg (rat)

Dermal LD50 11890 mg/kg (rbt)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· **Target organs:**

- Skin.
- Eye.

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**12 Ecological information:**

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

**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:** -

**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):**

872-50-4 | N-methyl-2-pyrrolidone

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

All ingredients are listed.

- **California Proposition 65:**

- **Developmental Toxicity**

872-50-4 | N-methyl-2-pyrrolidone

- **Carcinogenic categories**

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

None of the ingredients is listed.

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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

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

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

Xi Irritant

· **Risk phrases:**

36/38 Irritating to eyes and skin.

· **Safety phrases:**

24/25 Avoid contact with skin and eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28 After contact with skin, wash immediately with plenty of water

37/39 Wear suitable gloves and eye/face protection.

60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
NK	35-50

· **Water hazard class:** Generally not 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.**