



# Material Safety Data Sheet

## **1. IDENTIFICATION OF PRODUCT AND SUPPLIER**

**Product name:** Homocystein (Liquid)  
**Supplier:** ClearChem Diagnostics  
14752 Franklin Ave., Suite D  
Tustin, CA. 92780  
714-7348041/714-7348036(fax)

## **2. CHEMICAL CHARACTERIZATION / INFORMATION ON INGREDIENTS**

Supplier: Diazyme Laboratories  
12889 Gregg Court  
Poway, CA 92064, USA  
858-455-4754  
Manufacturer: Diazyme Laboratories  
12889 Gregg Court  
Poway, CA 92064, USA  
858-455-4754  
Authorized Representative: MDSS GmbH  
Schiffgraben 41  
30175 Hannover  
Germany  
In case of Emergency: Call Diazyme Laboratories (858-455-4754)  
Intended Use: Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

## **3. HAZARDS IDENTIFICATION**

Reagent R1 1,2-Propanediol 10% 57-55-6 200-338-0  
None Listed None Listed 24/25  
Reagent R2 Glycerol 20% 56-81-5 200-289-5 None  
Listed None Listed 24/25  
Reagent R3 Glycerol 15% 56-81-5 200-289-5 None  
Listed None Listed 24/25  
NOTE: Physical and health hazard information on reagent mixtures has not been determined. Any physical and health information noted is based on 1) evaluation of data for the pure ingredients, and 2) concentration of ingredients as packaged

## **4. FIRST AID MEASURES**

**1,2-PROPANEDIOL:**  
Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.  
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.  
Ingestion: Get medical aid. Wash mouth out with water.  
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.  
Notes to Physician: Treat symptomatically and supportively. MATERIAL SAFETY DATA SHEET  
Conforms to 93/112/EC and ISO 11014-1 Responsible  
Name: Diazyme Administration  
Effective 08/05/08  
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**GLYCEROL:**  
Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.  
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.  
Ingestion: Get medical aid. Wash mouth out with water.  
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.  
Notes to Physician: Treat symptomatically and supportively.

#### **5. FIRE-FIGHTING MEASURES**

##### **1,2-PROPANEDIOL & GLYCEROL:**

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

#### **6. ACCIDENTAL RELEASE MEASURES**

##### **1,2-PROPANEDIOL:**

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

##### **GLYCEROL:**

General Information: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Do not let this chemical enter the environment.

#### **7. HANDLING AND STORAGE**

##### **1,2-PROPANEDIOL:**

Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container.

##### **GLYCEROL:**

Handling: Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Store in a tightly closed container.

#### **8. EXPOSURE CONTROLS / PERSONNEL PROTECTION**

##### **1,2-PROPANEDIOL:**

###### **Engineering Controls:**

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

###### **Exposure Limits**

United Kingdom, WEL - TWA: 150 ppm TWA (total particulate and vapour); 474 mg/m<sup>3</sup>

TWA (total particulate);

United Kingdom, WEL - STEL: 450 ppm STEL (total particulate and vapour); 1422 mg/m<sup>3</sup>

STEL (total particulate)

###### **Personal Protective Equipment**

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

##### **GLYCEROL:**

###### **Engineering Controls:**

Use adequate ventilation to keep airborne concentrations low. Exposure Limits

United Kingdom, WEL - TWA: 10 mg/m<sup>3</sup>

TWA (mist) United Kingdom,

WEL - STEL: 30 mg/m<sup>3</sup>

STEL (mist); United States OSHA: 15 mg/m<sup>3</sup>

TWA (total dust); 5 mg/m<sup>3</sup>

TWA (respirable

fraction); Belgium - TWA: 10 mg/m<sup>3</sup>

VLE (mist); France - VME: 10 mg/m<sup>3</sup>

VME; Malaysia: 10 mg/m<sup>3</sup>

TWA (mist); Netherlands: 10 mg/m<sup>3</sup>

MAC (mist); Spain: 10 mg/m<sup>3</sup>

VLA-ED Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### **9. PHYSICAL AND CHEMICAL PROPERTIES**

#### **1,2-PROPANEDIOL**

Physical State: Viscous liquid

Color: Clear

Odor: odorless

pH: Not available

Vapor Pressure: 0.13mbar @20 deg C

Viscosity: 45 mPas @20 deg C

Boiling Point: 187 deg C @760mmHg ( 368.60°F)

Freezing/Melting Point: -60 deg C ( -76.00°F)

Autoignition Temperature: 400 deg C ( 752.00 deg F)

Flash Point: 99 deg C ( 210.20 deg F)

Explosion Limits: Lower: 2.5 Vol %

Explosion Limits: Upper: 12.6 Vol %

Decomposition Temperature: Not available

Solubility in water: Miscible

Specific Gravity/Density: 1.030

Molecular Formula: C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>

Molecular Weight: 76.09

#### **GLYCEROL:**

Physical State: Viscous liquid

Color: clear, colorless

Odor: odorless

pH: 5 (100 g/l aq.sol.)

Vapor Pressure: 0.003mbar @50 deg C

Viscosity: 1069 mPas @20 deg C

Boiling Point: 290 deg C @760mmHg ( 554.00°F)

Freezing/Melting Point: 18 deg C ( 64.40°F)

Autoignition Temperature: 400 deg C ( 752.00 deg F)

Flash Point: 160 deg C ( 320.00 deg F)

Explosion Limits: Lower: 0.9 Vol %

Explosion Limits: Upper: Not available

Decomposition Temperature: Not available

Solubility in water: >500 g/l (20°C)

Specific Gravity/Density: 1.261

Molecular Formula: C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>

Molecular Weight: 92.09

### **10. STABILITY AND REACTIVITY**

#### **1,2-PROPANEDIOL:**

Chemical Stability: Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Incompatible materials, exposure to moist air or water.

Incompatibilities with Other Materials: Oxidizing agents, reducing agents, acid chlorides, nitric acid, acid anhydrides, hydrofluoric acid, chloroformates.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur

#### **GLYCEROL:**

Chemical Stability: Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Incompatible materials, exposure to moist air or water, temperatures above 140°C.

Incompatibilities with Other Materials: Strong oxidizing agents, lead oxide, nitric acid, sulfuric acid, hydrogen peroxide, potassium permanganate, calcium hypochlorite, perchloric acid.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

### **11. TOXICOLOGICAL INFORMATION**

1,2-PROPANEDIOL: RTECS#: CAS# 57-55-6: TY2000000

LD50/LC50: RTECS: CAS# 57-55-6: Draize test, rabbit, eye: 100 mg Mild; Draize test, rabbit, eye: 500 mg/24H Mild; Oral, mouse: LD50 = 22 gm/kg;

Oral, mouse: LD50 = 20300 mg/kg;

Oral, rabbit: LD50 = 18500 mg/kg;

Oral, rat: LD50 = 20 gm/kg;

Skin, rabbit: LD50 = 20800 mg/kg;

Skin, rabbit: LD50 = 20800 mg/kg;

Carcinogenicity: 1,2-Propanediol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.



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Other: See actual entry in RTECS for complete information.

The toxicological properties have not been fully investigated.

## **12. ECOLOGICAL INFORMATION**

1,2-PROPANEDIOL: Ecotoxicity: Fish: Fathead Minnow: LC50: 54900 mg/L; 96h; Fish: Rainbow trout: LC50: 51600 mg/L; 96h; Daphnia: Daphnia: EC50: 34400 mg/L; 48h Other: Readily biodegradable

## **13. DISPOSAL CONSIDERATIONS**

1,2-PROPANEDIOL & GLYCEROL:

Dispose of in a manner consistent with federal, state, and local regulations.

## **14. TRANSPORT INFORMATION**

Shipping information: Not regulated

## **15. REGULATORY INFORMATION**

1,2-PROPANEDIOL:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases: Not available

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 57-55-6: 0

Canada CAS# 57-55-6 is listed on Canada's DSL List

US Federal TSCA

CAS# 57-55-6 is listed on the TSCA Inventory

GLYCEROL:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 56-81-5: 0

Canada

CAS# 56-81-5 is listed on Canada's DSL List

US Federal

TSCA

CAS# 56-81-5 is listed on the TSCA Inventory

## **16. OTHER INFORMATION**

The information herein is believed to be correct as of the date hereof but is provided without warranty of any kind. The recipient of our products is responsible for observing any laws and guidelines applicable