



**Ethylene Glycol (BDH1125-1LP, BDH1125-4LP, BDH1125-4LG)**

Version 1

Revision Date 03/26/2009

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**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Ethylene Glycol (BDH1125-1LP, BDH1125-4LP, BDH1125-4LG)  
 MSDS Number : 000000011718  
 Product Use Description : Solvent

Manufacturer : Honeywell  
 1953 South Harvey Street  
 Muskegon, MI 49442

Manufactured for : VWR International LLC  
 1310 Goshen Parkway  
 West Chester, PA 19380

For more information call : (Monday-Friday, 8.00am-5:00pm)  
 1-800-932-5000

In case of emergency call : (24 hours/day, 7 days/week)  
 1-800-424-9300(USA Only)  
**For Transportation Emergencies:**  
 1-800-424-9300 (CHEMTREC - Domestic)  
 1-613-966-6666 (CANUTEC - Canada)

**SECTION 2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Form : liquid, clear  
 Color : colourless  
 Odor : odourless

Hazard Summary : Harmful or fatal if swallowed. May cause eye, skin, and respiratory tract irritation. Prolonged skin contact may defat the skin and produce dermatitis.

**Potential Health Effects**

Skin : May irritate skin.  
 May cause systemic poisoning with symptoms paralleling those of inhalation.  
 Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.



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- Eyes : May irritate eyes.  
Signs/symptoms can include redness, swelling, pain, and tearing.
- Ingestion : Harmful or fatal if swallowed.  
Can cause kidney toxicity, narcotic effects and metabolic acidosis.
- Inhalation : May cause respiratory tract irritation.
- Chronic Exposure : Causes damage to the following:  
Kidney  
Central nervous system  
Respiratory system  
Contains material that may adversely affect the developing foetus.

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Weight %
Ethane-1,2-diol	107-21-1	100.00

**SECTION 4. FIRST AID MEASURES**

- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.
- Ingestion : If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel. Call a physician.

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**Notes to physician**

Treatment : Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES**

- Flash point : 111 °C (232 °F)  
closed cup
- Ignition temperature : 410 °C (770 °F)
- Lower explosion limit : 3.2 %(V)
- Upper explosion limit : 15.3 %(V)
- Suitable extinguishing media : Water spray  
Dry chemical  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)
- Specific hazards during fire fighting : In case of fire hazardous decomposition products may be produced such as:  
Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Wear personal protective equipment.  
Immediately evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Do not swallow.  
Avoid breathing vapors, mist or gas.  
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Discharge into the environment must be avoided.  
Do not flush into surface water or sanitary sewer system.  
Prevent product from entering drains.  
Collect contaminated fire extinguishing water separately. This


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must not be discharged into drains.

Methods for cleaning up : Ventilate the area.  
 Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

**SECTION 7. HANDLING AND STORAGE**
**Handling**

Handling : Wear personal protective equipment.  
 Use only in well-ventilated areas.  
 Keep container tightly closed.  
 Do not smoke.  
 Do not swallow.  
 Avoid breathing vapors, mist or gas.  
 Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.  
 Take precautionary measures against static discharges.  
 Ensure all equipment is electrically grounded before beginning transfer operations.  
 Use explosion-proof equipment.  
 Keep product and empty container away from heat and sources of ignition.  
 No sparking tools should be used.  
 No smoking.

**Storage**

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Keep away from heat and sources of ignition.  
 Keep away from direct sunlight.  
 Protect from physical damage.  
 Store away from incompatible substances.  
 Container hazardous when empty.  
 Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**



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- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
- Engineering measures : Use with local exhaust ventilation.
- Eye protection : Wear as appropriate:  
Safety glasses with side-shields  
Safety goggles
- Hand protection : Protective gloves  
Gloves must be inspected prior to use.  
Replace when worn.
- Skin and body protection : Wear as appropriate:  
Solvent-resistant apron  
Flame retardant antistatic protective clothing  
If splashes are likely to occur, wear:  
Protective suit
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.  
Use NIOSH approved respiratory protection.
- Hygiene measures : When using, do not eat, drink or smoke.  
Wash hands before breaks and immediately after handling the product.  
Keep working clothes separately.  
Remove and wash contaminated clothing before re-use.  
Do not swallow.  
Avoid breathing vapors, mist or gas.  
Avoid contact with skin, eyes and clothing.  
This material has an established AIHA ERPG exposure limit.  
The current list of ERPG exposure limits can be found at <http://www.aiha.org/1documents/Committees/ERP-erpglevels.pdf>.

**Exposure Guidelines**

Ethane-1,2-diol	107-21-1	ACGIH	Ceiling	Aerosol.	100 mg/m3
			Form of exposure		
		OSHA Z1A	Ceiling		
		US CA OEL	Ceiling	40 ppm	100 mg/m3
			Form of exposure	Vapor.	

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: liquid, clear
Color	: colourless
Odor	: odourless
Molecular Weight	: 60.07 g/mol
pH	: not applicable
Melting point/range	: -12 °C (10 °F)
Boiling point/boiling range	: 197 °C (387 °F)
Vapor pressure	: 0.08 hPa at 20 °C (68 °F)
Relative vapour density	: 2.1 (Air = 1.0)
Density	: 1.113 g/cm <sup>3</sup>
Water solubility	: completely miscible

**SECTION 10. STABILITY AND REACTIVITY**

Conditions to avoid	: Heat, flames and sparks. Keep away from direct sunlight.
Materials to avoid	: Chromium trioxide permanganates, e.g. potassium permanganate Disilver oxide Chlorosulfonic acid Oleum Sulfuric acid
Thermal decomposition	: In case of fire hazardous decomposition products may be produced such as:, Carbon monoxide, Carbon dioxide (CO <sub>2</sub> )
Hazardous reactions	: Hazardous polymerisation does not occur. Stable under normal conditions.

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**SECTION 11. TOXICOLOGICAL INFORMATION**

- Acute oral toxicity : LD50 rat  
Dose: 8,000 mg/kg
- Acute dermal toxicity : LD50 rabbit  
Dose: 10,600 mg/kg
- Acute inhalation toxicity : LC50 rat  
Dose: > 100 mg/l  
Exposure time: 2 h
- Skin irritation : rabbit  
Mild skin irritation
- Eye irritation : rabbit  
mild transient effects
- Repeated dose toxicity : Oral rat Kidney toxicity  
Exposure time: 13 Weeks
- Repeated dose toxicity : Oral rat Kidney damage, NOEL  
71mg/kg/d  
Exposure time: 16 Weeks
- Repeated dose toxicity : Oral rat Carcinogenicity, Did not show carcinogenic effects in animal experiments.  
1,000mg/kg/d  
Exposure time: Lifetime Exposure
- Repeated dose toxicity : Oral mouse Carcinogenicity, Did not show carcinogenic effects in animal experiments.  
1,000mg/kg/d  
Exposure time: Lifetime Exposure
- Repeated dose toxicity : Oral mouse Developmental Toxicity, Incomplete skeletal ossification, Teratogenic effects occur at doses which did not also produce effects in the maternal animal.  
100mg/kg/d
- Repeated dose toxicity : Oral gavage bioassay rat Developmental Toxicity, Incomplete skeletal ossification, Skeletal malformation, decrease in body weight, NOAEL (developmental toxicity)  
200mg/kg/d
- Genotoxicity in vitro : In vitro tests did not show mutagenic effects

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Reproductive toxicity : mouse  
No toxicity to reproduction

Reproductive toxicity : rat  
No toxicity to reproduction

Additional advice : Acute toxicity  
Can cause kidney toxicity, narcotic effects and metabolic acidosis.

**SECTION 12. ECOLOGICAL INFORMATION**

Biodegradability : Readily biodegradable.

Toxicity to fish : LC50  
Species: not specified  
Dose: 22,800 mg/l

Toxicity to daphnia and other aquatic invertebrates. : Immobilization EC50  
Species: Daphnia  
Dose: > 20,000 mg/l

Toxicity to algae : Growth inhibition EC50  
Species: Algae  
Dose: > 100 mg/l  
Exposure time: 48 h

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Information: Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** Not dangerous goods

**TDG** Not dangerous goods

**IATA** Not dangerous goods

**IMDG** Not dangerous goods




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**SECTION 15. REGULATORY INFORMATION**
**Inventories**

- |   |   |  |
|---|---|--|
| EU. EINECS  | : | On the inventory, or in compliance with the inventory        |
| US. Toxic Substances Control Act  | : | On TSCA Inventory  |
| Australia. Industrial Chemical (Notification and Assessment) Act  | : | On the inventory, or in compliance with the inventory        |
| Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133) | : | All components of this product are on the Canadian DSL list. |
| Japan. Kashin-Hou Law List  | : | On the inventory, or in compliance with the inventory        |
| Korea. Toxic Chemical Control Law (TCCL) List   | : | On the inventory, or in compliance with the inventory        |
| Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act                                       | : | On the inventory, or in compliance with the inventory        |
| China. Inventory of Existing Chemical Substances  | : | On the inventory, or in compliance with the inventory        |
| CH INV - Switzerland  | : | On the inventory, or in compliance with the inventory        |
| NZIOC - New Zealand   | : | On the inventory, or in compliance with the inventory        |

**National regulatory information**

- |                             |   |  |          |
|-----------------------------|---|--|----------|
| <b>SARA 313 Components</b>  | : | Ethane-1,2-diol                              | 107-21-1 |
| <b>SARA 311/312 Hazards</b> | : | Acute Health Hazard<br>Chronic Health Hazard |          |
| <b>CERCLA Reportable</b>    | : | 5000 lbs                                     |          |



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**Quantity**

**California Prop. 65** : This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

**Massachusetts RTK** : Ethane-1,2-diol 107-21-1

**New Jersey RTK** : Ethane-1,2-diol 107-21-1

**Pennsylvania RTK** : Ethane-1,2-diol 107-21-1

**WHMIS Classification** : D2A  
 This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**SECTION 16. OTHER INFORMATION**

	<b>HMIS III</b>	<b>NFPA</b>
Health Hazard	: 2*	2
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

**Further information**

\* - Chronic health hazard