



SAFETY DATA SHEET

Date of issue: 25/11/02

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Catalogue No: 109621

ID No.: 1032400

Product name: **Ethylene glycol, GR, (1,2-ethanediol)**

Use of the substance/preparation: Chemical reagent

Manufacturer/supplier identification

Company: VWR International Ltd., Merck House, Poole, Dorset, BH15 1TD, England
Telephone : + 44 (0) 1202 669700 Telefax : + 44 (0) 1202 665599

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2. Composition/information on ingredients

Chemical characterization

Organic solvent

Product name: Ethanediol
Synonyms: 1,2-Dihydroxyethane

CAS number: 107-21-1
EC Index No.: 603-027-00-1
Molecular formula: $C_2H_{6O_2} = 62.07 \text{ g/mol}$

EC-No.: 203-473-3

3. Hazards identification

Harmful if swallowed.

4. First aid measures

- Eye contact: Irrigate thoroughly with water for at least 10 minutes. OBTAIN MEDICAL ATTENTION.
- Inhalation: Remove from exposure, rest and keep warm. In severe cases obtain medical attention.
- Skin contact: Wash off skin thoroughly with water. Remove contaminated clothing and wash before re-use. Unless contact has been slight, OBTAIN MEDICAL ATTENTION.
- Ingestion: Wash out mouth thoroughly with water and give plenty of water to drink. OBTAIN MEDICAL ATTENTION.

5. Fire-fighting measures

Special risks:

Combustible.

Suitable extinguishing media:

Water spray, foam, dry powder or carbon dioxide

6. Accidental release measures

Wear appropriate protective clothing.

Absorb on an inert absorbent, (e.g. BDH Spillage absorption granules), transfer to a suitable container and arrange removal by disposal company. Wash site of spillage thoroughly with water and detergent.

For large spillages liquids should be contained with sand or earth and both liquids and solids transferred to salvage containers.

Any residues should be treated as for small spillages.

7. Handling and storage

Handling:

Do not breathe vapour. Avoid contact with skin and eyes. Wash hands and face thoroughly after working with material. Contaminated clothing should be removed and washed before re-use.

Storage:

Store at room temperature (15 to 25°C recommended). Keep well closed and protected from direct sunlight and moisture.

8. Exposure controls/personal protection

UK Exposure Limits:

OES - Ethane-1,2-diol:

Particulate. Long term: 10 mg/m³ (IOELV, S k)

Vapour. Long term: 52 mg/m³ Short term: 104 mg/m³ (IOELV, Sk)

Personal protective equipment:

As appropriate to the situation and the quantity handled. Engineering methods to control or prevent exposure are preferred. Methods could include process enclosure or mechanical ventilation.

- Ventilation: Fume cupboard, flameproof
- Respirator: Self-contained breathing apparatus when vapours are generated.
- Gloves: Nitrile
- Eye Protection: Goggles or face-shield
- Other Precautions: Plastic apron, sleeves, boots - if handling large quantities

9. Physical and chemical properties

General information:

Form:	viscous liquid
Colour:	colourless
Odour:	almost odourless

Health, safety and environmental information:

Melting temperature	-12°C
Boiling temperature	197°C

Density(g/ml)		1.11
Vapour pressure		1mmHg, 54°C
Relative vapour density:		2.14
Solubility in water		Miscible in all proportions
Flash point		118°C
Explosion limits:	lower:	1.8%
	upper:	13%
Auto-ignition temperature		410°C
Viscosity:		21 mPa.s (20°C)
Log P(o/w):		-1.36
Additional data:		Refractive index: 1.4318 (589 nm, 20°C)

10. Stability and reactivity

hygroscopic

Substances to be avoided

aluminium, chromyl chloride, alkali hydroxides, perchloric acid, strong oxidizing agents.
The possibility of reaction with other substances cannot be excluded.

11. Toxicological information

After ingestion and inhalation: irritant effect. Rapid absorption.

- After eye contact: local irritation symptoms
- After skin contact: irritant effect. Danger of skin absorption.
- After ingestion: harmful. abdominal pain, agitation, nausea, vomiting, CNS disorders.

Systemic effect: After a latency period: tiredness, ataxia (impaired locomotor coordination), unconsciousness. Damage to: kidneys.

Further data

LD50 (oral, rat): 4700 mg/kg

NOAEL 67 mg/m³

We have no evidence of carcinogenic effects. Evidence of reproductive effects.

12. Ecological information

No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention.
Bioaccumulation potential: low (Log Pow <2). Biological degradability: good. Low aquatic toxicity.

13. Disposal considerations

Chemical residues are generally classified as special waste, and as such are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company. Rinse out empty containers thoroughly before returning for recycling.

When recovery and recycling is not possible, incineration in a high temperature incinerator is the recommended method of disposal.

14. Transport information

Not subject to transport regulations.

15. Regulatory information

Labelling according to EC directives

Symbol: Xn Harmful.

R-phrases: R22

Harmful if swallowed.

S-phrases:

EC-No.: 203-473-3

Local Regulations

Within the UK, the use of this material must be assessed under the Control of Substances Hazardous to Health (COSHH) regulations.

16. Other information

Revision.

Supersedes edition of: 13/03/02

Changes in Section : 2,6,7,11

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