

1. Identification

Product Code **CE2104-16**

Product Name **ETHANE-1,2-DIOL pure**

Other Names ,2-ethane diol

Molecular Formula $\text{HOCH}_2\text{CH}_2\text{OH}$ =62.07

CAS Number 107-21-1

Supplier: **BEECROFT & PARTNERS**

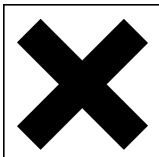
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(Have this document to hand)

2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Ethane-1,2-diol	107-21-1	203-473-3	> 99.0%	Xn : R22	OES

3. Hazards Identification

Harmful if swallowed.

4. First Aid Measures

Eyes Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.

Skin Thoroughly wash off skin with soap and water. Remove contaminated clothing immediately and wash before re-use. If discomfort persists OBTAIN MEDICAL ATTENTION.

Inhalation Remove from exposure.

Ingestion Obtain medical assistance to determine whether to induce vomiting or not. OBTAIN MEDICAL ATTENTION URGENTLY. Acute intoxication may be successfully treated with ethyl alcohol.

5. Fire Fighting Measures

Hazards Fire-fighters should wear protective clothing and breathing apparatus. Vapour-air mixtures are explosive.

Extinguishing Media Alcohol resistant foam, dry powder, carbon dioxide or vaporising liquid. Use water spray to keep fire exposed containers cool.

Unsuitable Media Do not use water jet.

6. Accidental Release Measures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots.
Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Wash area down with copious amounts of water.

7. Storage & Handling

Handling Precautions	Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Product is hygroscopic: store in sealed containers away from heat, light and humidity. Keep well separated from oxidising agents.

8.1 Occupational Exposure Limits

Occupational Exposure Standard	Long Term (8hr TWA):	-	ppm	60	mg m-3
	Short Term (15min Period):	-	ppm	125	mg m-3

8.2 Personal Protection

Respiratory	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hands	Use solvent resistant gloves.
Eyes	Use chemical splash proof glasses or goggles.
Skin	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

9. Physical & Chemical Properties

Appearance	Colourless slightly viscous liquid.
Odour	No specific odour.
pH	7 (range pH 6-8)
Boiling point	197.5 °C
Melting point	-13.0 °C
Flash point	116.0 °C (Closed cup)
Upper Flammable Limit	15.5%
Lower Flammable Limit	3.2%
Auto Ignition	413.0 °C
Explosive properties	Moderate/severe in confined spaces.
Oxidising Properties	No.
Vapour Pressure	0.05 mmHg @ 20 °C
Relative Density	1.1150
Water Solubility	Completely miscible in water.

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
Materials to Avoid	Strong oxidising agents. Dangerous reactions occur with fuming sulphuric, nitric, perchloric and chlorosulphonic acids.

10. Stability & Reactivity (continued)

Hazardous None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.
Decomposition Products

11. Toxicological Information

Eyes Both the vapour and liquid are, mildly irritating to the eye.

Skin Repeated or prolonged contact may defat the skin producing irritation and dermatitis. May be absorbed through the skin.

LD50 Skin Not available

Ingest Oral toxicity in animals is generally low, in contrast to high acute toxicity in man. Lethal dose is under 100ml or about 1.5g/Kg. (As ethane 1,2 diol). Accidental or deliberate ingestion accounts for 40-60 deaths per year. Ingestion of a toxic dose causes abdominal disturbance, malaise, lumbar pain, kidney failure, and central nervous system depression. Death is usually due to cardiac and respiratory failure.

LD50 Ingest Human LDlo 1.5g/Kg

Inhalation The low vapour pressure precludes excessive exposure to the vapour at room temperature, but at elevated temperatures it is toxic by inhalation of vapours or from aerosol mists.

Carcinogenicity Not considered to be a carcinogen.

Mutagenicity Not considered to be a mutagen.

Reproductive Effects Has recently been recognised as a reproductive toxin and further studies are being carried out.

12. Ecological

COD=1.29gO2/g. Aquatic toxicity LC50 goldfish, 24 hr static >5000 mg/l.

13. Disposal Considerations

Disposal Methods Dispose of in a licensed incinerator for organic solvents. Never dispose of into water courses or sewerage systems.

Contaminated Packaging Wash out containers with water. Use a licensed waste disposer.

14. Transport Information

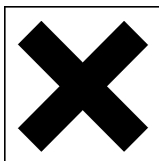
Proper Shipping Name Non-restricted
UN Number Non-restricted
UN Classification None
Subsidiary Risk None
Flash Point 116.0 °C (Closed cup)
Packing Group None
Marine pollutant No
ADR Hazard ID Non-restricted

15. Regulatory Information

Labelling Harmful.
Classification

Label Symbols

Xn



Risk & safety Phrases Harmful if swallowed. Keep out of reach of children.

EEC Number 203-473-3

16. Other Information

Document Information This document has been prepared in accordance with directive 88/379/EEC.

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.

Revision Date: 26/10/98.

Data reviewed and PDF file generated: 07/06/04.

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