# Scientific Laboratory Supplies - Safety Data Sheet CHE1920

**(in accordance with regulation (EU) 2015/830 and regulation (EC) 1272/2008)**

Revision: 1.0 Revision date: 24 August 2016
Date printed: 16 June 2020

## Section 1. Identification

**1.1 Product Identifier** CHE1920

Product Name ETHANE-1,2-DIOL pure 2.5L.

CAS Number 107-21-1
REACH Registration No 01-2119456816-28-XXXX

Molecular Formula $HOCH_2CH_2OH$ =62.07

**1.2 Relevent identified uses of the substance or mixure & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

**1.3 Supplier** Scientific Laboratory Supplies

Wilford Industrial Estate
Ruddington Lane
Wilford
Nottingham
NG11 7EP
UNITED KINGDOM

Phone 0115 9821111
Fax 0115 9825275
Email sales@scientific-labs.com

**1.4 Emergency Telephone** (08:00-17:00) 0115 9821111
(24hr) 112
(Have this document to hand)

## Section 2. Hazards Identification

**2.1 Classification of the substance or mixture**

**Classification according to regulation 1272/2008/EC**

Acute toxicity, category 4 (oral) (Acute Tox. 4 (O)). Spec target organ tox - repeat, category 2 (STOT RE 2).

**2.2 Label elements**

**Labelling according to regulation 1272/2008/EC**

Signal word Warning

Hazard Pictograms

Hazard Statements Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. May affect the kidneys.

| | |
|---|---|
| Precautionary Statements | Wash thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. |

## Section 3. Composition

### 3.1 Substances

| Component | CAS No. | EEC No. | REACH No. | Conc w/w | CLP Classification (1272/2008/CE) |
|---|---|---|---|---|---|
| Ethane-1,2-diol | 107-21-1 | 203-473-3 | 01-2119456816-28-XXXX | >99% | Acute Tox. 4 (O),STOT RE 2 |

## Section 4. First Aid

**4.1 Description of 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. |
| Personal protection for first aiders | Wear protective gloves / eye protection. |

**4.2 Most important symptoms and effects, both acute & delayed.**

No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed.**

No further relevant information available.

## Section 5. Fire Fighting

**5.1 Extinguishing media**

| | |
|---|---|
| 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. |

**5.2 Special hazards arising from the substance or mixture**

| | |
|---|---|
| Hazards | Vapour-air mixtures are explosive. |

**5.3 Advice for firefighters**

| | |
|---|---|
| Advice for firefighters | Fire-fighters should wear protective clothing and breathing apparatus. |

## Section 6. Accidental Release Measures

**6.1 Personal precautions, protective equipment and emergency procedures**

| | |
|---|---|
| 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. |

**6.2 Environmental precautions**

| | |
|---|---|
| Enviromental | Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. |

**6.3 Methods and material for containment and cleaning up**

| | |
|---|---|
| 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. |

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

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.

### 7.2 Conditions for safe storage, including any incompatibilities

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.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

| Component | CAS No | Concentration | Workplace Exposure Limits | | | |
|---|---|---|---|---|---|---|
| | | | Long Term (8hr TWA) | | Short Term 15min period) | |
| Ethane-1,2-diol | 107-21-1 | >99% | 20.0 ppm | 40.0 mg/m-3 | 52.0 ppm | 104.0 mg/m-3 |

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 8.2 Exposure controls

| | |
|---|---|
| Respiratory Protection | 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. |
| Hand Protection | Use solvent resistant gloves. |
| Eye Protection | Use tightly fitting chemical splash proof glasses or goggles. |
| Skin Protection | Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn. |
| Special Hazards | No special precautions required. |

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Colourless slightly viscous liquid. |
| Odour | No specific odour. |
| pH | 7 @ 20°C range 6-8 |
| Boiling Point | 197.5°C |
| Melting Point | -13°C |
| Flash Point | 116°C (Closed cup) |
| Upper Flammable Limit | 15.5% |
| Lower Flammable Limit | 3.2% |
| Auto Ignition | 413°C |
| Explosive Properties | Moderate/severe in confined spaces. |
| Oxidising Properties | No. |
| Vapour Pressure | 0.05mmHg @ 20°C |
| Relative Density | 1.1150 |
| Water Solubility | Completely miscible in water. |

### 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

| | | |
|---|---|---|
| **10.1** | Reactivity | No data available. |
| **10.2** | Chemical Stability | Stable under normal conditions |
| **10.3** | Possibility of hazardous reactions | No data available. |
| **10.4** | Conditions to Avoid | Hot surfaces, naked flames or other sources of ignition. |
| **10.5** | Incompatable Materials | Strong oxidising agents. Dangerous reactions occur with fuming sulphuric, nitric, perchloric and chlorosulphonic acids. |
| **10.6** | Hazardous Decomposition Products | None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide. |

## Section 11. Toxicological Information

**11.1 Information on toxicological effects**

| | |
|---|---|
| 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 |
| Ingestion | 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 Oral | 1500mg/kg Human |
| 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. |
| LD50 Inhalation | Not available |
| TCLo | Not available |
| 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. |

## Section 12. Ecological

| | | |
|---|---|---|
| **12.1** | Toxicity | COD=1.29gO2/g. Aquatic toxicity LC50 goldfish, 24 hr static >5000 mg/l. |
| | LC50 Algal | Not available |
| | LC50 Crustacea | Not available |
| | LC50 Fish | Not available |
| **12.2** | Persistence and degradability | No data available. |
| **12.3** | Bioaccumulative potential | No data available. |
| **12.4** | Mobility in soil | No data available. |
| **12.5** | Results of PBT & vPvB assessment | Assessment not required. |
| **12.6** | Other adverse effects | None known at present. |

## Section 13. Disposal Considerations

**13.1 Waste treatment methods**

| | |
|---|---|
| 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. |

## Section 14. Transport Information

| | | |
|---|---|---|
| **14.1** | **UN Number** | Non-restricted |
| **14.2** | **Proper Shipping Name** | Non-restricted |
| **14.3** | **Transport classes** | |
| | UN classification | None |
| | Subsidiary hazard(s) | None |
| | Transport category | None |
| | ADR Hazard ID | Non-restricted |
| | Tunnel Restriction Code | Non-restricted |
| **14.4** | **Packing Group** | None |
| **14.5** | **Environment hazards** | See section 12. |
| **14.6** | **Special precautions for user** | No special precautions required. |
| **14.7** | **Transport in bulk** | Not transported in bulk. |

## Section 15. Regulatory Information

**15.1 Safety, health and environment regulations specific for subtance/mixture.**

**Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)**

| | |
|---|---|
| Classification | Acute toxicity, category 4 (oral); Spec target organ tox - repeat, category 2 |
| Signal word | Warning |
| Hazard Pictograms |  |
| Hazard Statements | H302, H373,<br>Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. May affect the kidneys. |
| Precautionary Statements | P264, P270, P301+P312, P330<br>Wash thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. |

**15.2 Chemical safety assessment**

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

Revision number: 1.0

Revision date: 24 August 2016

Reviewed by chemist: 24 August 2016

Printed date: 16 June 2020