DIETHYL OXALATE  
CAS No 95-92-1

MATERIAL SAFETY DATA SHEET  
SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers  
Product name : Diethyl Oxalate
CAS-No. : 95-92-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company : Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi -110002
INDIA

Telephone : +91 11 49404040
Email : care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1A), H314
Reproductive toxicity (Category 1B), H360FD
Specific target organ toxicity - single exposure, Dermal (Category 2), Kidney, H371
Specific target organ toxicity - repeated exposure, Oral (Category 1), Kidney, H372

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word : Danger
Hazard statement(s)
H302 : Harmful if swallowed.
H314 : Causes severe skin burns and eye damage.
H360FD May damage fertility. May damage the unborn child.
H371 May cause damage to organs (Kidney) in contact with skin.
H372 Causes damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statement(s)
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P310 Immediately call a POISON CENTER/doctor.

Supplemental Hazard Statements
none

Restricted to professional users.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula : C₆H₁₀O₄
Molecular weight : 146.14 g/mol
CAS-No. : 95-92-1
EC-No. : 202-464-1
Index-No. : 607-147-00-5

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyl oxalate</td>
<td>Acute Tox. 4; Skin Corr. 1A;</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>95-92-1</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-464-1</td>
<td>Repr. 1B; STOT SE 2; STOT</td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-147-00-5</td>
<td>RE 1; H302, H314, H360FD, H371, H372</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Avoid exposure - obtain special instructions before use. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Exposure to moisture
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineer protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid
   Colour: colourless

b) Odour
   No data available

c) Odour Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point/range: -41 °C

f) Initial boiling point and boiling range
   185 °C

g) Flash point
   75 °C - closed cup

h) Evaporation rate
   No data available

i) Flammability (solid, gas)
   No data available

j) Upper/lower flammability or explosive limits
   Upper explosion limit: 2.67 % (V)
   Lower explosion limit: 0.42 % (V)

k) Vapour pressure
   1 mmHg at 47 °C

l) Vapour density
   5.85

m) Relative density
   1.076 g/mL at 25 °C
n) Water solubility slightly soluble
o) Partition coefficient: n-octanol/water log Pow: 1.31 at 25 °C
p) Auto-ignition temperature No data available
q) Decomposition temperature No data available
r) Viscosity No data available
s) Explosive properties Not explosive
t) Oxidizing properties The substance or mixture is not classified as oxidizing.

9.2 Other safety information
   Surface tension 32.22
   Relative vapour density 5.85

SECTION 10: Stability and reactivity
10.1 Reactivity
   No data available

10.2 Chemical stability
   Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
   No data available

10.4 Conditions to avoid
   Heat, flames and sparks.

10.5 Incompatible materials
   Oxidizing agents

10.6 Hazardous decomposition products
   Hazardous decomposition products formed under fire conditions. - Carbon oxides
   Other decomposition products - No data available
   In the event of fire: see section 5

SECTION 11: Toxicological information
11.1 Information on toxicological effects
   Acute toxicity
   LD50 Oral - Rat - > 400 mg/kg(Diethyl oxalate) LD50
   Dermal - Rat - > 2,000 mg/kg(Diethyl oxalate)

   Skin corrosion/irritation
   Skin - in vitro assay(Diethyl oxalate)
   Result: Causes severe burns.
   (Skin corrosion: Human Skin Model Test)

   Serious eye damage/eye irritation
   No data available(Diethyl oxalate)

   Respiratory or skin sensitisation
   Did not cause sensitisation on laboratory animals.(Diethyl oxalate)

   Germ cell mutagenicity
   In vitro tests did not show mutagenic effects(Diethyl oxalate)
   Chromosome aberration test in vitro(Diethyl oxalate)
   Result: negative
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Presumed human reproductive toxicant May damage the unborn child. (Diethyl oxalate)
May damage fertility. (Diethyl oxalate)

Specific target organ toxicity - single exposure
Skin contact - May cause damage to organs. - Kidney(Diethyl oxalate)

Specific target organ toxicity - repeated exposure
Oral - Causes damage to organs through prolonged or repeated exposure. - Kidney

Aspiration hazard
No data available(Diethyl oxalate)

Additional Information
RTECS: RO2800000

SECTION 12: Ecological information
12.1 Toxicity
Toxicity to fish LC0 - Leuciscus idus melanotus - 108 mg/l - 48 h(Diethyl oxalate)
LC50 - Poecilia reticulata (guppy) - 97.36 mg/l - 96 h(Diethyl oxalate)

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 100 mg/l - 24 h(Diethyl oxalate)

Toxicity to algae
ErC50 - Desmodesmus subspicatus (green algae) - 77.1 mg/l - 72 h(Diethyl oxalate)

12.2 Persistence and degradability
Biodegradability Result: 67.9 % - Biodegradable (OECD Test Guideline 301D)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Diethyl oxalate)

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
Harmful to aquatic life.

SECTION 13: Disposal considerations
13.1 Waste treatment methods
Product
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product
SECTION 14: Transport information

14.1 UN number
ADR/RID: 2525  IMDG: 2525  IATA: 2525

14.2 UN proper shipping name
ADR/RID: ETHYL OXALATE
IMDG: ETHYL OXALATE
IATA: ETHYL OXALATE

14.3 Transport hazard class(es)
ADR/RID: 6.1  IMDG: 6.1  IATA: 6.1

14.4 Packaging group
ADR/RID: III  IMDG: III  IATA: III

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H360FD May damage fertility. May damage the unborn child.
H371 May cause damage to organs \$/*\_ORG\_SING\_DERM/\$) in contact with skin.
H372 Causes damage to organs through prolonged or repeated exposure if swallowed.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.