ETHYL CYANOACETATE  
CAS No 105-56-6  

MATERIAL SAFETY DATA SHEET  
SDS/MSDS

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

1.1 Product identifiers
Product name : Ethyl Cyanoacetate
CAS-No. : 105-56-6

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
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
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 Warning
Hazard statement(s)
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
Precautionary statement(s)
P280 Wear protective gloves/ protective clothing.
Supplemental Hazard none

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. Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula: C₅H₇NO₂
Molecular weight: 113.12 g/mol
CAS-No.: 105-56-6
EC-No.: 203-309-0

<table>
<thead>
<tr>
<th>Hazardous ingredients according to Regulation (EC) No 1272/2008</th>
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</thead>
<tbody>
<tr>
<td>Component</td>
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<tr>
<td>-----------</td>
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<tr>
<td>Ethyl cyanoacetate</td>
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</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
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
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, Nitrogen oxides (NOx)

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

5.4 Further information
No data available

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.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. 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.
Normal measures for preventive fire protection.
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.
Storage class (TRGS 510): Combustible liquids not in Storage Class 3

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
Face shield and safety glasses 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**
Do not let product enter drains.

**SECTION 9: Physical and chemical properties**

9.1 **Information on basic physical and chemical properties**

- **a)** Appearance
  - Form: clear, 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: -22 °C - lit.
- **f)** Initial boiling point and boiling range
  - 208 - 210 °C - lit.
- **g)** Flash point
  - 109 °C - closed cup
- **h)** Evaporation rate
  - No data available
- **i)** Flammability (solid, gas)
  - No data available
- **j)** Upper/lower flammability or explosive limits
  - No data available
- **k)** Vapour pressure
  - 1 mmHg at 67.8 °C
- **l)** Vapour density
  - 3.91 - (Air = 1.0)
- **m)** Relative density
  - 1.063 g/cm³ at 25 °C
- **n)** Water solubility
  - No data available
- **o)** Partition coefficient: n-octanol/water
  - No data available
- **p)** Auto-ignition temperature
  - No data available
- **q)** Decomposition temperature
  - No data available
- **r)** Viscosity
  - No data available
- **s)** Explosive properties
  - No data available
- **t)** Oxidizing properties
  - No data available
9.2 Other safety information
Relative vapour density 3.91 - (Air = 1.0)

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
No data available

10.5 Incompatible materials
Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)
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 Subcutaneous - Guinea pig - 1,115 mg/kg(Ethyl cyanoacetate)
Remarks: Behavioral:Tremor. Behavioral:Muscle contraction or spasticity. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Skin corrosion/irritation
No data available(Ethyl cyanoacetate)

Serious eye damage/eye irritation
No data available(Ethyl cyanoacetate)

Respiratory or skin sensitisation
No data available(Ethyl cyanoacetate)

Germ cell mutagenicity
No data available(Ethyl cyanoacetate)

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
No data available(Ethyl cyanoacetate)

Specific target organ toxicity - single exposure
No data available(Ethyl cyanoacetate)

Specific target organ toxicity - repeated exposure
No data available(Ethyl cyanoacetate)

Aspiration hazard
No data available(Ethyl cyanoacetate)
Additional Information
RTECS: AG4110000
Cough, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Ethyl cyanoacetate)

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available(Ethyl cyanoacetate)

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
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: - 
IMDG: - 
IATA: 3334

14.2 UN proper shipping name
ADR/RID: Not dangerous goods 
IMDG: Not dangerous goods 
IATA: Aviation regulated liquid, n.o.s. (Ethyl cyanoacetate)
Passenger Aircraft: Not permitted for transport
Cargo Aircraft: Not permitted for transport

14.3 Transport hazard class(es)
ADR/RID: - 
IMDG: - 
IATA: 9

14.4 Packaging group
ADR/RID: - 
IMDG: - 
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.
    H312 Harmful in contact with skin.
    H332 Harmful if inhaled.

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.