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

1.1  **Product identifiers**  
Product name: Ethyl Benzene  
CAS-No.: 100-41-4

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-10002  
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  
Flammable liquids (Category 2), H225  
Acute toxicity, Inhalation (Category 4), H332  
Specific target organ toxicity - repeated exposure (Category 2), hearing organs, H373  
Aspiration hazard (Category 1), H304  
Chronic aquatic toxicity (Category 3), H412

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

Classification according to EU Directives 67/548/EEC or 1999/45/EC  
F  Highly flammable  
Xn  Harmful  
R11  R20, R48/20, R65

For the full text of the R-phrases 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)
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P331 Do NOT induce vomiting.

Supplemental Hazard Statements

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 : C8H10
Molecular weight : 106.17 g/mol
CAS-No. : 100-41-4
EC-No. : 202-849-4
Index-No. : 601-023-00-4

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>Ethylbenzene</td>
<td>Flam. Liq. 2; Acute Tox. 4; Aquatic Chronic 3; H225, H304, H332, H373, H412</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>100-41-4</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-849-4</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>601-023-00-4</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene</td>
<td>F, Xn, R11 - R20 - R48/20 -</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>100-41-4</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-849-4</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>601-023-00-4</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases 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
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, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

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. 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.
hygroscopic
Storage class (TRGS 510): Flammable liquids

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
Components with workplace 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, Flame retardant antistatic protective clothing., 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 a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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: -95 °C - lit.
f) Initial boiling point and boiling range 136 °C - lit.
g) Flash point 15,0 °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: 6,7 %(V)
Lower explosion limit: 1 %(V)
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapour pressure</td>
<td>13.3 hPa at 20 °C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.867 g/mL at 25 °C</td>
</tr>
<tr>
<td>Water solubility</td>
<td>0.2 g/l at 25 °C - slightly soluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: 3.6 at 20 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>432.0 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.773 mm²/s at 20 °C</td>
</tr>
<tr>
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</tr>
<tr>
<td>Viscosity</td>
<td>0.773 mm²/s at 20 °C</td>
</tr>
<tr>
<td>Surface tension</td>
<td>71.2 mN/m at 23 °C</td>
</tr>
</tbody>
</table>

**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**
Strong oxidizing agents

**10.6 Hazardous decomposition products**
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 - male and female - 3.500 mg/kg
LD₅₀ Dermal - Rabbit - 15.433 mg/kg

**Skin corrosion/irritation**
Skin - Rabbit
Result: Moderate skin irritation - 24 h

**Serious eye damage/eye irritation**
Eyes - Rabbit
Result: Mild eye irritation

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
Hamster ovary
Result: negative

Mouse - male and female
Result: negative
Carcinogenicity
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethylbenzene)

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
May be fatal if swallowed and enters airways.

Additional Information
Repeated dose toxicity - Rat - male and female - No observed adverse effect level - 75 mg/kg
RTECS: DA0700000
Central nervous system depression, Nausea, Headache, Vomiting, Ataxia., Tremors

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish flow-through test LC50 - Menidia menidia (Atlantic silverside) - 5,1 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 1,8 - 2,4 mg/l - 48 h
Toxicity to algae static test EC50 - Skeletonema costatum - 4,9 mg/l - 72 h

12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: 70 - 80 % - Readily biodegradable

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

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 with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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: 1175  IMDG: 1175  IATA: 1175

14.2 UN proper shipping name
   ADR/RID: ETHYLBENZENE
   IMDG: ETHYLBENZENE
   IATA: Ethylbenzene

14.3 Transport hazard class(es)
   ADR/RID: 3  IMDG: 3  IATA: 3

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

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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.

- Acute Tox.: Acute toxicity
- Aquatic Chronic: Chronic aquatic toxicity
- Asp. Tox.: Aspiration hazard
- Flam. Liq.: Flammable liquids
- H225: Highly flammable liquid and vapour.
- H304: May be fatal if swallowed and enters airways.
- H332: Harmful if inhaled.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H412: Harmful to aquatic life with long lasting effects.
- STOT RE: Specific target organ toxicity - repeated exposure

Full text of R-phrases referred to under sections 2 and 3

- F: Highly flammable
- Xn: Harmful
- R11: Highly flammable.
- R20: Harmful by inhalation.
- R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- R65: Harmful: may cause lung damage 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.