# CYCLOHEXENE

## Safety Data Sheet ENEC0620

**Date of issue:** 29/08/2016  
**Version:** 1.0

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

#### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Substance name</td>
<td>CYCLOHEXENE</td>
</tr>
<tr>
<td>Product code</td>
<td>ENEC0620</td>
</tr>
<tr>
<td>Formula</td>
<td>C₆H₁₀</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TETRAHYDROBENZENE, BENZENETETRAHYDRIDE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>HYDROCARBON</td>
</tr>
</tbody>
</table>

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**1.2.1. Relevant identified uses**

- **Use of the substance/mixture:** Chemical intermediate

**1.2.2. Uses advised against**

- No additional information available

#### 1.3. Details of the supplier of the safety data sheet

**GELEST, INC.**  
11 East Steel Road  
Morrisville, PA 19067  
USA  
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST  
info@gelest.com - www.gelest.com

**GELEST INC.**  
Fritz-Klatte-Strasse 8  
65933 Frankfurt  
Germany  
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM  
info@gelestde.com - www.gelestde.com

#### 1.4. Emergency telephone number

- **Emergency number:** CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids, Category 2</td>
</tr>
<tr>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Acute toxicity (dermal), Category 4</td>
</tr>
</tbody>
</table>

**Adverse physicochemical, human health and environmental effects**  
No additional information available

#### 2.2. Label elements

<table>
<thead>
<tr>
<th>Labelling according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazard pictograms (CLP):</strong> GHS02, GHS07</td>
</tr>
<tr>
<td><strong>Signal word (CLP):</strong> Danger</td>
</tr>
</tbody>
</table>
| **Hazard statements (CLP):** H225 - Highly flammable liquid and vapour.  
H302+H312 - Harmful if swallowed or in contact with skin |
Precautionary statements (CLP)

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P330 - Rinse mouth.
P301+P312 - IF SWALLOWED: Call a doctor if you feel unwell.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>CYCLOHEXENE</td>
<td>110-83-8</td>
<td>203-807-8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexene</td>
<td>(CAS-No.) 110-83-8</td>
<td>95 - 100</td>
<td>Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/… Get medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects after inhalation: May cause irritation to the respiratory tract.

Symptoms/effects after skin contact: May cause mild skin irritation. Harmful in contact with skin.

Symptoms/effects after eye contact: May cause eye irritation.

Symptoms/effects after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Highly flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Explosion hazard: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Eliminate every possible source of ignition. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Collect spillage. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent formation of vapour. Take precautionary measures against static discharge. Use only non-sparking tools.
Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.
Storage conditions: Keep container tightly closed. Keep in a cool place.
Incompatible materials: Oxidizing agent.
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cyclohexene (110-83-5)

<table>
<thead>
<tr>
<th>Country</th>
<th>MAK (mg/m³)</th>
<th>MAK (ppm)</th>
<th>MAK Short time value (mg/m³)</th>
<th>MAK Short time value (ppm)</th>
<th>Limit value (mg/m³)</th>
<th>Limit value (ppm)</th>
<th>VME (mg/m³)</th>
<th>VME (ppm)</th>
<th>OEL TWA (mg/m³)</th>
<th>OEL TWA (ppm)</th>
<th>US IDLH (mg/m³)</th>
<th>US IDLH (ppm)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
<th>NIOSH REL (TWA) (ppm)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
<th>VLA-ED (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
<th>OSHA PEL (TWA) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td></td>
<td>MAK</td>
<td>1015 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>300 mg/m³</td>
<td>300 ppm</td>
<td>1015 mg/m³</td>
<td>300 ppm</td>
<td>1015 mg/m³</td>
<td>300 ppm</td>
<td>1020 mg/m³</td>
<td>300 ppm</td>
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</tr>
<tr>
<td>Austria</td>
<td>MAK</td>
<td></td>
<td>300 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1200 mg/m³</td>
<td>1200 ppm</td>
<td>4060 mg/m³</td>
<td>4060 ppm</td>
<td>4060 mg/m³</td>
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<td>1020 mg/m³</td>
<td>1020 mg/m³</td>
<td>1020 mg/m³</td>
</tr>
</tbody>
</table>
Table 8.2

<table>
<thead>
<tr>
<th>Location</th>
<th>Exposure Limit (ppm)</th>
<th>Exposure Limit (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>VLA-ED (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Switzerland</td>
<td>MAK (mg/m³)</td>
<td>1015 mg/m³</td>
</tr>
<tr>
<td>Switzerland</td>
<td>MAK (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Exposure Limity (PEL) (mg/m³)</td>
<td>1000 mg/m³</td>
</tr>
<tr>
<td>Denmark</td>
<td>Grænseværdie (langvarig) (mg/m³)</td>
<td>1015 mg/m³</td>
</tr>
<tr>
<td>Denmark</td>
<td>Grænseværdie (langvarig) (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Finland</td>
<td>HTP-arvo (8h) (mg/m³)</td>
<td>1000 mg/m³</td>
</tr>
<tr>
<td>Finland</td>
<td>HTP-arvo (8h) (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Finland</td>
<td>HTP-arvo (15 min)</td>
<td>1300 mg/m³</td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref) (mg/m³)</td>
<td>1015 mg/m³</td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref) (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (15 min ref) (mg/m³)</td>
<td>3045 mg/m³ (calculated)</td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (15 min ref) (ppm)</td>
<td>900 ppm (calculated)</td>
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<tr>
<td>Lithuania</td>
<td>IPRV (mg/m³)</td>
<td>50 mg/m³</td>
</tr>
<tr>
<td>Norway</td>
<td>Grenseverdier (AN) (mg/m³)</td>
<td>510 mg/m³</td>
</tr>
<tr>
<td>Norway</td>
<td>Grenseverdier (AN) (ppm)</td>
<td>150 ppm</td>
</tr>
<tr>
<td>Norway</td>
<td>Grenseverdier (Korttidsverdi) (mg/m3)</td>
<td>510 mg/m³</td>
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<tr>
<td>Norway</td>
<td>Grenseverdier (Korttidsverdi) (ppm)</td>
<td>150 ppm</td>
</tr>
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<td>Poland</td>
<td>NDS (mg/m³)</td>
<td>300 mg/m³</td>
</tr>
<tr>
<td>Poland</td>
<td>NDSCh (mg/m³)</td>
<td>900 mg/m³</td>
</tr>
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<td>Romania</td>
<td>OEL TWA (mg/m³)</td>
<td>700 mg/m³</td>
</tr>
<tr>
<td>Romania</td>
<td>OEL TWA (ppm)</td>
<td>208 ppm</td>
</tr>
<tr>
<td>Romania</td>
<td>OEL STEL (mg/m³)</td>
<td>1200 mg/m³</td>
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<tr>
<td>Romania</td>
<td>OEL STEL (ppm)</td>
<td>357 ppm</td>
</tr>
<tr>
<td>Slovakia</td>
<td>NPHV (priemerná) (mg/m³)</td>
<td>1000 mg/m³</td>
</tr>
<tr>
<td>Slovakia</td>
<td>NPHV (priemerná) (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VEMP (mg/m³)</td>
<td>1010 mg/m³</td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VEMP (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Australia</td>
<td>TWA (mg/m³)</td>
<td>1010 mg/m³</td>
</tr>
<tr>
<td>Australia</td>
<td>TWA (ppm)</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Portugal</td>
<td>OEL TWA (ppm)</td>
<td>300 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Provide local exhaust or general room ventilation.

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles. Contact lenses should not be worn

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- **Physical state**: Liquid
- **Appearance**: Clear liquid.
- **Molecular mass**: 82.14 g/mol
- **Colour**: No data available
- **Odour**: strong.
- **Odour threshold**: No data available
- **Refractive index**: 1.446
- **pH**: No data available
- **Relative evaporation rate (butylacetate=1)**: > 1
- **Melting point**: -104 °C
- **Freezing point**: No data available
- **Boiling point**: 83 °C
- **Flash point**: -12 °C
- **Auto-ignition temperature**: 250 °C
- **Decomposition temperature**: No data available
- **Flammability (solid, gas)**: Highly flammable liquid and vapour.
- **Vapour pressure**: 160 mm Hg @ 30°C
- **Relative vapour density at 20 °C**: 2.8
- **Relative density**: 0.811
- **% Volatiles**: 100%
- **Solubility**: Insoluble in water. Water: 1.8 mg/l
- **Log Pow**: No data available
- **Log Kow**: No data available
- **Viscosity, kinematic**: No data available
- **Viscosity, dynamic**: No data available
- **Explosive properties**: No data available
- **Oxidising properties**: No data available
- **Explosive limits**: 1.2 - 7.7 vol % (lower; upper)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

**Acute toxicity**: Harmful if swallowed. Harmful in contact with skin.

<table>
<thead>
<tr>
<th>CYCLOHEXENE (110-83-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE CLP (oral)</td>
<td>1300 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>1231 mg/kg bodyweight</td>
</tr>
<tr>
<td>Cyclohaxene (110-83-8)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>1300 mg/kg</td>
</tr>
</tbody>
</table>
Cyclohexene (110-83-8)

LD50 dermal rabbit : 1231 mg/kg
ATE CLP (oral) : 1300 mg/kg bodyweight
ATE CLP (dermal) : 1231 mg/kg bodyweight

- Skin corrosion/irritation : Not classified
- Serious eye damage/irritation : Not classified
- Respiratory or skin sensitisation : Not classified
- Germ cell mutagenicity : Not classified
- Carcinogenicity : Not classified
- Reproductive toxicity : Not classified
- STOT-single exposure : Not classified
- STOT-repeated exposure : Not classified
- Aspiration hazard : Not classified
- Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
- Symptoms/effects after skin contact : May cause mild skin irritation. Harmful in contact with skin.
- Symptoms/effects after eye contact : May cause eye irritation.
- Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects : This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR) : 2256
UN-No. (IMDG) : 2256
UN-No. (IATA) : 2256
UN-No. (ADN) : 2256
UN-No. (RID) : 2256

14.2. UN proper shipping name
Proper Shipping Name (ADR) : CYCLOHEXENE
Proper Shipping Name (IMDG) : CYCLOHEXENE
Proper Shipping Name (IATA) : Cyclohexene
### 14.3. Transport hazard class(es)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Transport hazard class(es)</th>
<th>Danger labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>IMDG</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>IATA</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ADN</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RID</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### 14.4. Packing group

<table>
<thead>
<tr>
<th>Mode</th>
<th>Packing group</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>II</td>
</tr>
<tr>
<td>IMDG</td>
<td>II</td>
</tr>
<tr>
<td>IATA</td>
<td>II</td>
</tr>
<tr>
<td>ADN</td>
<td>II</td>
</tr>
<tr>
<td>RID</td>
<td>II</td>
</tr>
</tbody>
</table>
14.5. Environmental hazards

- Dangerous for the environment: No
- Marine pollutant: No
- Other information: No supplementary information available

14.6. Special precautions for user

- Overland transport
  - Classification code (ADR): F1
  - Limited quantities (ADR): 1L
  - Excepted quantities (ADR): E2
  - Packing instructions (ADR): P001, IBC02, R001
  - Mixed packing provisions (ADR): MP19
  - Portable tank and bulk container instructions (ADR): T4
  - Portable tank and bulk container special provisions (ADR): TP1
  - Tank code (ADR): LGBF
  - Vehicle for tank carriage: FL
  - Transport category (ADR): 2
  - Special provisions for carriage - Operation (ADR): S2, S20
  - Hazard identification number (Kemler No.): 33
  - Orange plates:

- Tunnel restriction code (ADR): D/E
- EAC code: 3YE

- Transport by sea
  - Limited quantities (IMDG): 1L
  - Excepted quantities (IMDG): E2
  - Packing instructions (IMDG): P001
  - IBC packing instructions (IMDG): IBC02
  - Tank instructions (IMDG): T4
  - Tank special provisions (IMDG): TP1
  - EmS-No. (Fire): F-E
  - EmS-No. (Spillage): S-D
  - Stowage category (IMDG): E

- Air transport
  - PCA Excepted quantities (IATA): E2
  - PCA Limited quantities (IATA): Y341
  - PCA limited quantity max net quantity (IATA): 1L
  - PCA packing instructions (IATA): 353
  - PCA max net quantity (IATA): 5L
  - CAO packing instructions (IATA): 364
  - CAO max net quantity (IATA): 60L
  - ERG code (IATA): 3H

- Inland waterway transport
  - Classification code (ADN): F1
  - Limited quantities (ADN): 1L
  - Excepted quantities (ADN): E2
  - Equipment required (ADN): PP, EX, A
  - Ventilation (ADN): VE01
Number of blue cones/lights (ADN): 1

- Rail transport
  Classification code (RID): F1
  Limited quantities (RID): 1L
  Excepted quantities (RID): E2
  Packing instructions (RID): P001, IBC02, R001
  Mixed packing provisions (RID): MP19
  Portable tank and bulk container instructions (RID): T4
  Portable tank and bulk container special provisions (RID): TP1
  Tank codes for RID tanks (RID): LGBF
  Transport category (RID): 2
  Coils express (express parcels) (RID): CE7
  Hazard identification number (RID): 33

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory Information

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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
CYCLOHEXENE is not on the REACH Candidate List
CYCLOHEXENE is not on the REACH Annex XIV List
CYCLOHEXENE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles: 100%

15.1.2. National regulations

Germany
Reference to AwSV: Water hazard class (WGK) 2, Significantly hazardous to water (KBwS-Beschluss; ID No. 65)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen: CYCLOHEXENE is listed
SZW-lijst van mutagene stoffen: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: The substance is not listed

Denmark
Classification remarks: Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations: Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:
Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal), Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids, Category 2</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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