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

Product information
Product Name: Cyclohexane
Material: 1015388, 1098296, 1080331, 1059057, 1026806, 1025303, 1026803, 1026805

Company: Chevron Phillips Chemical Company LP
10001 Six Pines Drive
The Woodlands, TX 77380

Emergency telephone:
Health: 866.442.9628 (North America)
1.832.813.4984 (International)
Transport: CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431

Responsible Department: Product Safety and Toxicology Group
E-mail address: SDS@CPChem.com
Website: www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture
GHS Classification and labelling according to JIS Z7252-2014 and JIS Z7253-2012 (GHS 2011)

Classification:
- Flammable liquids, Category 2
- Skin irritation, Category 2
- Eye irritation, Category 2A
- Reproductive toxicity, Category 2
- Specific target organ toxicity - single exposure, Category 3
- Aspiration hazard, Category 1
- Short-term (acute) aquatic hazard, Category 1

SDS Number: 100000068314
Cyclohexane

Version 2.9

Revision Date 2019-09-11

Labeling

Symbol(s): 

- Flammable
- Dangerous
- Risk of injury

Signal Word: Danger

Hazard Statements:
- H225: Highly flammable liquid and vapor.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.
- H336: May cause drowsiness or dizziness.
- H361: Suspected of damaging fertility or the unborn child.
- H371: May cause damage to organs (Vasculature).
- H400: Very toxic to aquatic life.

Precautionary Statements:

Prevention:
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233: Keep container tightly closed.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/lighting/equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P260: Do not breathe dust/fume/gas/mist/vapor/spray.
- P264: Wash skin thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- 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.
- P308 + P313: IF exposed or concerned: Get medical advice/attention.
- P331: Do NOT induce vomiting.
- P332 + P331: IF skin irritation occurs: Get medical advice/attention.
- P337 + P313: IF eye irritation persists: Get medical advice/attention.
- P362 + P364: Take off contaminated clothing and wash it before reuse.
Cyclohexane

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>Not Established</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular formula</td>
<td>C6H12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration</th>
<th>ENCS/ISHL number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>99.9% - 100%</td>
<td>3-2233</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

General advice: Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

If inhaled: Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.

In case of skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

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

If swallowed: Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point: -18.3 °C (-0.9 °F)
Method: closed cup

Autoignition temperature: 260 °C (500 °F)

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.

P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391: Collect spillage.
Storage:
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
Disposal:
P501: Dispose of contents/container to an approved waste disposal plant.
Cyclohexane

Unsuitable extinguishing media: High volume water jet.

Specific hazards during fire fighting: Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection: Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products: Carbon Dioxide. Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and storage

Handling

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations. Electrostatic charge may accumulate and create a hazardous
condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient. Review all operations, which have the potential to generating and accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106 “Flammable and Combustible Liquids”; National Fire Protection Association (NFPA 77), "Recommended Practice on Static Electricity"; and/or the American Petroleum Institute (API) Recommended Practice 2003, “Protection Against Ignitions Arising Out of Static, Lightning, and stray Currents”.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers: No smoking. 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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>JP OEL JSOH</td>
<td>OEL-M</td>
<td>150 ppm, 520 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the
product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

**Appearance**
- Physical state : Liquid
- Color : Colorless
- Odor : chlorform-like, irritating

**Safety data**
- Flash point : -18.3 °C (-0.9 °F)
  Method: closed cup
- Lower explosion limit : 1.3 %(V)
- Upper explosion limit : 8 %(V)
- Oxidizing properties : no
- Autoignition temperature : 260 °C (500 °F)
- Molecular formula : C6H12
- Molecular weight : 84.18 g/mol
- pH : Not applicable
- Pour point : No data available
- Melting point/range : 6.59 °C (43.86 °F)
- Boiling point/boiling range : 80.7 °C (177.3 °F)
- Vapor pressure : 3.26 PSI at 37.8 °C (100.0 °F)
- Relative density : 0.78 at 15.6 °C (60.1 °F)
- Density : 0.8 g/cm³
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water solubility</td>
<td>Soluble in hydrocarbon solvents, natural oils, fats, and waxes; insoluble in water.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>0.953 cSt at 37.8 °C (100.0 °F)</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>2.9 (Air = 1.0)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>1.95</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>&gt; 99 %</td>
</tr>
<tr>
<td>Conductivity</td>
<td>&lt; 5 pSm</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

**Reactivity**
Stable at normal ambient temperature and pressure.

**Chemical stability**
This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

**Hazardous reactions**
Hazardous reactions: Hazardous polymerization does not occur.
Further information: No decomposition if stored and applied as directed.
Hazardous reactions: Vapors may form explosive mixture with air.

**Conditions to avoid**
Heat, flames and sparks.

**Materials to avoid**
May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Oxidizing solids. Oxidizing liquids.

**Hazardous decomposition products**
Carbon Dioxide
Carbon oxides

**Other data**
No decomposition if stored and applied as directed.

**SECTION 11: Toxicological information**

**Acute oral toxicity**
### Cyclohexane

**Version 2.9**

**Revision Date** 2019-09-11

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50</th>
<th>Species</th>
<th>Sex</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>&gt; 5,000 mg/kg</td>
<td>Rat</td>
<td>male and female</td>
<td>OECD Test Guideline 401</td>
</tr>
</tbody>
</table>

**Acute inhalation toxicity**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50</th>
<th>Species</th>
<th>Sex</th>
<th>Test atmosphere</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>&gt; 32,880 mg/m³</td>
<td>Rat</td>
<td>male and female</td>
<td>Vapor</td>
<td>OECD Test Guideline 403</td>
</tr>
</tbody>
</table>

**Skin irritation**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>May cause skin irritation in susceptible persons.</td>
</tr>
</tbody>
</table>

**Eye irritation**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>No adverse effects expected. Vapors may cause irritation to the eyes, respiratory system and the skin.</td>
</tr>
</tbody>
</table>

**Sensitization**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>Did not cause sensitization on laboratory animals.</td>
</tr>
</tbody>
</table>

**Repeated dose toxicity**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Species</th>
<th>Application Route</th>
<th>Dose</th>
<th>Exposure time</th>
<th>Number of exposures</th>
<th>NOEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>Rat</td>
<td>Inhalation</td>
<td>0, 500, 2000, 7000 ppm</td>
<td>90 day</td>
<td>6 h/d, 5 d/wk</td>
<td>2000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rat, Male and female</td>
<td>Inhalation</td>
<td>0, 500, 2000, 7000 ppm</td>
<td>13-14 wk</td>
<td>6 hr/d, 5 d/wk</td>
<td>7000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mouse, Male and female</td>
<td>Inhalation</td>
<td>0, 500, 2000, 7000 ppm</td>
<td>13-14 wk</td>
<td>6 hr/d, 5 d/wk</td>
<td>2000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Target Organs: Blood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Genotoxicity in vitro**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test Type</th>
<th>Metabolic activation</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>Ames test</td>
<td>with and without metabolic activation</td>
<td>Mutagenicity (Escherichia coli - reverse mutation assay)</td>
<td>negative</td>
</tr>
</tbody>
</table>
Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 476
Result: negative

Genotoxicity in vivo
Cyclohexane : Test Type: Cytogenetic assay
Species: Rat
Cell type: Bone marrow
Dose: 96.6, 307.2, 10141.6 ppm
Result: negative

Reproductive toxicity
Cyclohexane : Species: Rat
Application Route: Inhalation
Dose: 0, 500, 2000, 7000 ppm
Number of exposures: 6 hr/d, 5 d/wk
Method: OECD Test Guideline 416
NOAEL Parent: 500 ppm
NOAEL F1: 7000 ppm
NOAEL F2: 7000 ppm

Developmental Toxicity
Cyclohexane : Species: Rat
Application Route: Inhalation
Dose: 0, 500, 2,000, 7,000 PPM
Number of exposures: 6 hr/d
Test period: GD 6-15
Method: OECD Guideline 414
NOAEL Teratogenicity: 7,000 ppm
NOAEL Maternal: 500 ppm

Cyclohexane
Species: Rabbit
Application Route: Inhalation
Dose: 0, 500, 2,000, 7,000 PPM
Number of exposures: 6 hr/d
Test period: GD 6-18
Method: OECD Guideline 414
NOAEL Teratogenicity: 7,000 ppm
NOAEL Maternal: 500 ppm

Cyclohexane
Aspiration toxicity : May be fatal if swallowed and enters airways.
Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

CMR effects
Cyclohexane : Carcinogenicity: Not classifiable as a human carcinogen.
## Cyclohexane

**Mutagenicity**: Did not show mutagenic effects in animal experiments.

**Teratogenicity**: Did not show teratogenic effects in animal experiments.

**Reproductive toxicity**: No toxicity to reproduction

### Further information

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

### SECTION 12: Ecological information

#### Ecotoxicity effects

**Toxicity to fish**

<table>
<thead>
<tr>
<th>Compound</th>
<th>LC50</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>4.53 mg/l</td>
<td>96 h</td>
<td>Pimephales promelas (fathead minnow)</td>
<td>OECD Test Guideline 203</td>
</tr>
</tbody>
</table>

**Toxicity to daphnia and other aquatic invertebrates**

<table>
<thead>
<tr>
<th>Compound</th>
<th>EC50</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>0.9 mg/l</td>
<td>48 h</td>
<td>Daphnia magna (Water flea)</td>
<td>OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

**Toxicity to algae**

<table>
<thead>
<tr>
<th>Compound</th>
<th>EbC50</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>3.4 mg/l</td>
<td>72 h</td>
<td>Selenastrum capricornutum (algae)</td>
<td>OECD Test Guideline 201</td>
</tr>
</tbody>
</table>

**NOEC**: 0.925 mg/l

<table>
<thead>
<tr>
<th>Compound</th>
<th>Exposure time</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudokirchneriella subcapitata (microalgae)</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
<td></td>
</tr>
</tbody>
</table>

**M-Factor**

<table>
<thead>
<tr>
<th>Compound</th>
<th>M-Factor (Acute Aquat. Tox.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cyclohexane</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Biodegradability

<table>
<thead>
<tr>
<th>Compound</th>
<th>Biodegradability</th>
<th>Testing period</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>77 %</td>
<td>28 d</td>
<td>OECD Test Guideline 301</td>
</tr>
</tbody>
</table>

This material is expected to be readily biodegradable.

**Elimination information (persistence and degradability)**
Bioaccumulation

Cyclohexane: Bioconcentration factor (BCF): 167
This material is not expected to bioaccumulate.

Mobility: No data available

Results of PBT assessment
Cyclohexane: Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
Cyclohexane: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard
Cyclohexane: Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.
Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).
Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.). Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.
## Cyclohexane

### US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

UN1145, CYCLOHEXANE, 3, II, RQ (CYCLOHEXANE)

### IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN1145, CYCLOHEXANE, 3, II, (-18.3 °C), MARINE POLLUTANT, (CYCLOHEXANE)

### IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN1145, CYCLOHEXANE, 3, II

### ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

UN1145, CYCLOHEXANE, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (CYCLOHEXANE)

### RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

UN1145, CYCLOHEXANE, 3, II, ENVIRONMENTALLY HAZARDOUS, (CYCLOHEXANE)

### ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN1145, CYCLOHEXANE, 3, II, ENVIRONMENTALLY HAZARDOUS, (CYCLOHEXANE)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

| Other information : | Cyclohexane, S.T. 2, Cat. Y |

### SECTION 15: Regulatory information

#### National legislation

**Poisonous and Deleterious Substances Control Law**

: Not applicable

#### Industrial Safety and Health Law

- **Substances Subject to be Notified Names Article 57-2**
  - (Enforcement Order Table 9)
  - Enforcement Order of the Industrial Safety and Health Law - Attached table 1
  - (Dangerous Substances)
  - : cyclohexane (232)

- **Inflammable Substance**

- **Harmful Substances Required Permission for Manufacture**

- **Hazardous Substances Subject to Labeling Requirements Article 57**

: Not applicable

: cyclohexane (232)
Cyclohexane

(Enforcement Order Article 18)
- Ordinance on Prevention of Organic Solvent Poisoning: Not applicable
- Ordinance on Prevention of Lead Poisoning: Not applicable
- Harmful Substances Prohibited from Manufacture: Not applicable
- Ordinance on Prevention of Hazards Due to Specified Chemical Substances: Not applicable
- Ordinance on Prevention of Tetraalkyl Lead Poisoning: Not applicable

Substances Prevented From Impairment of Health: Not applicable

Chemical Substance Control Law
- Priority Assessment Chemical Substance: cyclohexane (96)

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof: Not applicable

Other regulations
- Fire Service Law: Flammable liquids
  - Type 1 petroleum
  - Hazardous rank II
- Explosive Control Law: Not relevant
- Vessel Safety Law: Flammable liquids (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)
- Aviation Law: Flammable liquid (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Notification status
- Europe REACH: This product is in full compliance according to REACH regulation 1907/2006/EC.
- Switzerland CH INV: On the inventory, or in compliance with the inventory
- United States of America (USA) TSCA: On or in compliance with the active portion of the TSCA inventory
- Canada DSL: All components of this product are on the Canadian DSL
- Australia AICS: On the inventory, or in compliance with the inventory
- New Zealand NZIoC: On the inventory, or in compliance with the inventory
- Japan ENCS: On the inventory, or in compliance with the inventory

SDS Number: 100000068314
Korea KECI: A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.

Philippines PICCS: On the inventory, or in compliance with the inventory

China IECSC: On the inventory, or in compliance with the inventory

Taiwan TCSI: On the inventory, or in compliance with the inventory

SECTION 16: Other information

Further information

Legacy SDS Number: 895

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
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<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
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<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
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<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
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<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
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