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

Product information

Product Name: Orfom® MCO (Flotation Oil)
Material: 1119702, 1119671, 1119669, 1119668, 1119693, 1119692, 1119650, 1117263, 1114151, 1108013, 1104301, 1096190, 1086158, 1016847, 1016846
Use: Mineral Processing Aide
Company: Chevron Phillips Chemical Company LP
Specialty Chemicals
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 (+61 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
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification:
- Flammable liquids, Category 3
- Skin irritation, Category 2
- Carcinogenicity, Category 1B
- Reproductive toxicity, Category 2
Specific target organ systemic toxicity - repeated exposure, Category 2, Blood, Liver, thymus gland
Aspiration hazard, Category 1

Labeling

Symbol(s): 

Signal Word: Danger

Hazard Statements:
- H226: Flammable liquid and vapor.
- H303: May be harmful if swallowed.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H350: May cause cancer.
- H361: Suspected of damaging fertility or the unborn child.
- H373: May cause damage to organs (Blood, Liver, thymus gland) through prolonged or repeated exposure.

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.
- 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 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P331 Do NOT induce vomiting.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
- 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.

**Carcinogenicity:**

**IARC**
Group 2B: Possibly carcinogenic to humans
Decant (clarified) Oils 64741-62-4
Light Cycle Oil 64741-59-9

**NTP**
Known to be human carcinogen
Light Cycle Oil 64741-59-9

### SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decant (clarified) Oils</td>
<td>64741-62-4</td>
<td>0 - 80</td>
</tr>
<tr>
<td>Light Cycle Oil</td>
<td>64741-59-9</td>
<td>0 - 80</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. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

**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. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

**If swallowed:**
Keep respiratory tract clear. 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:**
43 °C (110 °F)
Method: PMCC

**Autoignition temperature:**
No data available
Suitable extinguishing media: Carbon dioxide (CO2).

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. Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products: Carbon oxides. Sulfur oxides.

SECTION 6: Accidental release measures

Personal precautions: Use personal protective equipment. Ensure adequate ventilation.

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). Keep in suitable, closed containers for disposal.

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. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. 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.

Use: Mineral Processing Aide

SECTION 8: Exposure controls/personal protection

Engineering measures

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

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 according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate: Flame retardant protective clothing. Footwear protecting against chemicals.

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: Black
- Odor: Mild

Safety data
- Flash point: 43 °C (110 °F)
  Method: PMCC
- Lower explosion limit: No data available
- Upper explosion limit: No data available
- Autoignition temperature: No data available
- Molecular formula: Mixture
- Molecular weight: Not applicable
- pH: Not applicable
- Pour point: No data available

Boiling point/boiling range: 165 - 538 °C (329 - 1,000 °F)
Vapor pressure: 1.00 MMHG
  at 21 °C (70 °F)
  estimated
Relative density: 0.985
  at 15.6 °C (60.1 °F)
Water solubility: Negligible
Partition coefficient: n-octanol/water: No data available
Viscosity, kinematic: 35 - 45 cSt
  at 25 °C (77 °F)
Relative vapor density: 3
  (Air = 1.0)
Evaporation rate: 1

SECTION 10: Stability and reactivity

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 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.

Hazardous decomposition products: Carbon oxides, Sulfur oxides

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

SECTION 11: Toxicological information

Orfom® MCO (Flotation Oil)
Acute oral toxicity: 3,678 mg/kg
Method: Acute toxicity estimate

Acute toxicity estimate: 2,500 mg/kg
Method: Calculation method

Acute toxicity estimate: 1,980 mg/kg
Method: Calculation method

Orfom® MCO (Flotation Oil)
Acute inhalation toxicity: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Acute toxicity estimate

Acute toxicity estimate: 2.72 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute toxicity estimate: 2.72 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Orfom® MCO (Flotation Oil)
Acute dermal toxicity: > 2,000 mg/kg
Method: Acute toxicity estimate

Acute toxicity estimate: 2,500 mg/kg
Method: Calculation method
Acute toxicity estimate: 1,563 mg/kg
Method: Calculation method

**Orfom® MCO (Flotation Oil)**

**Skin irritation**
- Irritating to skin.

**Orfom® MCO (Flotation Oil)**

**Eye irritation**
- Vapors may cause irritation to the eyes, respiratory system and the skin.

**Orfom® MCO (Flotation Oil)**

**Sensitization**
- Contains no substance or substances classified as sensitizing. Information refers to the main ingredient.

**Repeated dose toxicity**

**Decant (clarified) Oils**
- Species: Rat
  - Application Route: Dermal
  - Dose: 0, 8, 30, 125, 500 mg/kg
  - Exposure time: 13 wk
  - Lowest observable effect level: 8 mg/kg
  - Target Organs: Liver

**Light Cycle Oil**
- Species: Rat, males
  - Sex: males
  - Application Route: Dermal
  - Dose: 0, 8, 25, 125, 500, 1250 mg/kg
  - Exposure time: 90 day
  - Number of exposures: 5 days/wk
  - NOEL: 25 mg/kg
  - Target Organs: Blood, Liver, Thymus

**Genotoxicity in vitro**

**Decant (clarified) Oils**
- Test Type: Modified Ames test
  - Result: positive
Test Type: Mouse lymphoma assay  
Result: positive  

Test Type: Sister Chromatid Exchange Assay  
Result: positive  

Test Type: Unscheduled DNA synthesis assay  
Result: positive  

Test Type: Cell transformation assay  
Result: Ambiguous  

Light Cycle Oil  
Test Type: Modified Ames test  
Result: positive  

Test Type: Mouse lymphoma assay  
Result: positive  

Test Type: Sister Chromatid Exchange Assay  
Result: negative  

Genotoxicity in vivo  
Decant (clarified) Oils  
Test Type: Sister Chromatid Exchange Assay  
Result: positive  

Light Cycle Oil  
Test Type: Cytogenetic assay  
Result: negative  

Reproductive toxicity  
Decant (clarified) Oils  
Suspected of damaging fertility or the unborn child.  

Developmental Toxicity  
Decant (clarified) Oils  
Species: Rat  
Application Route: Dermal  
Dose: 0, 0.05, 1, 50, 250 mg/kg/bw/d  
Exposure time: 6h/d  
Number of exposures: daily  
Test period: GD 0-19  
NOAEL Teratogenicity: 0.05 mg/kg  
NOAEL Maternal: 0.05 mg/kg  
Suspected of damaging fertility or the unborn child.  

Light Cycle Oil  
Species: Rat  
Application Route: Dermal  
Dose: 1, 50, 250 mg/kg/d  
Number of exposures: once daily  
Test period: GD 0-19  
Method: OECD Guideline 414  
NOAEL Teratogenicity: 1 mg/kg  
NOAEL Maternal: 1 mg/kg  

Orfom® MCO (Flotation Oil)  
Aspiration toxicity  
May be fatal if swallowed and enters airways.
## CMR effects

<table>
<thead>
<tr>
<th>Substance</th>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decant (clarified) Oils</td>
<td></td>
<td>Carcinogenicity: Possible human carcinogen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reproductive toxicity: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.</td>
</tr>
<tr>
<td>Light Cycle Oil</td>
<td></td>
<td>Carcinogenicity: Possible human carcinogen</td>
</tr>
<tr>
<td><strong>Orfom® MCO (Flotation Oil)</strong></td>
<td></td>
<td>Solvents may degrease the skin. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### Toxicity to fish

<table>
<thead>
<tr>
<th>Substance</th>
<th>LL50</th>
<th>Exposure time</th>
<th>Test Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decant (clarified) Oils</td>
<td>79 mg/l</td>
<td>96 h</td>
<td>OECD Test Guideline 203</td>
<td>Information given is based on data obtained from similar substances.</td>
</tr>
<tr>
<td>Light Cycle Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 0.3 mg/l</td>
<td>96 h</td>
<td>OECD Test Guideline 203</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td></td>
<td></td>
<td></td>
<td>Oncorhynchus mykiss (rainbow trout)</td>
</tr>
<tr>
<td>Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Toxicity to daphnia and other aquatic invertebrates

<table>
<thead>
<tr>
<th>Substance</th>
<th>EL50</th>
<th>Exposure time</th>
<th>Test Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decant (clarified) Oils</td>
<td>0.22 mg/l</td>
<td>48 h</td>
<td>OECD Test Guideline 202</td>
<td></td>
</tr>
<tr>
<td>Light Cycle Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.32 mg/l</td>
<td>48 h</td>
<td>OECD Test Guideline 202</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td></td>
<td></td>
<td></td>
<td>Daphnia magna (Water flea)</td>
</tr>
<tr>
<td>Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Toxicity to algae

<table>
<thead>
<tr>
<th>Substance</th>
<th>EL50</th>
<th>Exposure time</th>
<th>Test Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decant (clarified) Oils</td>
<td>0.32 mg/l</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
<td></td>
</tr>
<tr>
<td>Light Cycle Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.51 mg/l</td>
<td>72 h</td>
<td>OECD Test Guideline 201</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td></td>
<td></td>
<td></td>
<td>Pseudokirchneriella subcapitata (green algae)</td>
</tr>
<tr>
<td>Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### M-Factor

<table>
<thead>
<tr>
<th>Substance</th>
<th>M-Factor (Acute Aquat. Tox.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarified oils (petroleum), catalytic cracked</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Orfom® MCO (Flotation Oil)

Version 2.5

Revision Date 2019-05-09

SDS Number:100000013323

M-Factor

| Distillates (petroleum), light catalytic cracked | M-Factor (Acute Aquat. Tox.) | 1 |
| M-Factor (Chron. Aquat. Tox.) | 1 |

Biodegradability: This material is not expected to be readily biodegradable.

Elimination information (persistence and degradability)

Results of PBT assessment

Decant (clarified) Oils: Non-classified PBT substance, Non-classified vPvB substance

Light Cycle Oil: Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

Decant (clarified) Oils: Very toxic to aquatic life.

Light Cycle Oil: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard

Decant (clarified) Oils: Very toxic to aquatic life with long lasting effects.

Light Cycle Oil: 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.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN1268, PETROLEUM DISTILLATES, N.O.S., (DECANT (CLARIFIED) OILS, LIGHT CYCLE OIL), 3, III, (43 °C), MARINE POLLUTANT, (DECANT (CLARIFIED) OILS, LIGHT CYCLE OIL)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS, (DECANT (CLARIFIED) OILS, LIGHT CYCLE OIL)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III, ENVIRONMENTALLY HAZARDOUS, (DECANT (CLARIFIED) OILS, LIGHT CYCLE OIL)

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III, ENVIRONMENTALLY HAZARDOUS, (DECANT (CLARIFIED) OILS, LIGHT CYCLE OIL)

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

**SECTION 15: Regulatory information**

**National legislation**

**SARA 311/312 Hazards**: Fire Hazard
Acute Health Hazard
Chronic Health Hazard

**EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW**

SDS Number:100000013323
CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity: This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know: Light Cycle Oil - 64741-59-9

California Prop. 65 Components: WARNING! This product contains a chemical known in the State of California to cause cancer.

Notification status

Europe REACH: Not in compliance with the inventory

SDS Number: 100000013323

13/15
SAFETY DATA SHEET

Orfom® MCO (Flotation Oil)

Version 2.5

TSCA
United States of America (USA) : On TSCA Inventory
Canada : All components of this product are on the Canadian DSL
Australia AICS : On the inventory, or in compliance with the inventory
New Zealand NZIoC : Not in compliance with the inventory
Japan ENCS : On the inventory, or in compliance with the inventory
Korea KECI : On the inventory, or in compliance with the inventory
Philippines PICCS : Not in compliance with the inventory
China IECSC : On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 3
Fire Hazard: 3
Reactivity Hazard: 0

Legacy SDS Number : 59730

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>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>EC50%</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
</tbody>
</table>

SDS Number:100000013323
<table>
<thead>
<tr>
<th>MAK</th>
<th>Germany Maximum Concentration Values</th>
<th>PRNT</th>
<th>Presumed Not Toxic</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>=&gt;</td>
<td>Greater Than or Equal To</td>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>