SAFETY DATA SHEET

Synfluid® mPAO 150 cSt

Version 2.2

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

Product information

Product Name: Synfluid® mPAO 150 cSt
Material: 1116565, 1114612, 1114591

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

Local: CHEVRON PHILLIPS CHEMICALS ASIA PTE. LTD.
C/O DONG WOO CORPORATION
#B-2601,JEONGJAIL-RO,
BUNDANG-GU,SEONGNAMI-SI,
GYEONGGI-DO,13557
SOUTH KOREA
Telephone no.: +612-9186-1132

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
Standards for classification and labeling of chemical substances and material safety data sheet (ministry of employment and labor public notice No. 2013-37) (GHS 2009)

Classification

SDS Number:100000102070
This material is not classified as hazardous under the Article 39 Paragraph 1 of the Industrial Safety and Health Act (ISHA). It is not regulated for the MSDS creation and labeling by the provision of Article 41 Paragraph 1 of the ISHA.

Not applicable

**SECTION 3: Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>Polyalphaolefin; PAO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular formula</td>
<td>Polymer</td>
</tr>
<tr>
<td>Chemical name</td>
<td>1-Octene Homopolymer, Hydrogenated</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>70693-43-5</td>
</tr>
<tr>
<td>Concentration</td>
<td>100%</td>
</tr>
<tr>
<td>KECI Number</td>
<td></td>
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</tbody>
</table>

**SECTION 4: First aid measures**

**General advice**: No hazards which require special first aid measures.

**If inhaled**: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

**In case of skin contact**: Wash off with soap and water. Wash contaminated clothing before re-use.

**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. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

**SECTION 5: Firefighting measures**

**Flash point**: 250 °C (482 °F)
Method: ASTM D-92

**Suitable extinguishing media**: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**: High volume water jet.

**Specific hazards during firefighting**: Exposure to decomposition products may be a hazard to health.

**Special protective**: Wear self-contained breathing apparatus for firefighting if
**Synfluid® mPAO 150 cSt**

<table>
<thead>
<tr>
<th>Section</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SECTION 6: Accidental release measures</strong></td>
<td>Personal precautions: Material can create slippery conditions. Environmental precautions: Clean contaminated floors and objects thoroughly while observing environmental regulations. Methods for cleaning up: Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.</td>
</tr>
<tr>
<td><strong>SECTION 7: Handling and storage</strong></td>
<td>Handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Advice on protection against fire and explosion: Normal measures for preventive fire protection. Storage: Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.</td>
</tr>
<tr>
<td><strong>SECTION 8: Exposure controls/personal protection</strong></td>
<td>Engineering measures: Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace 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:</td>
</tr>
</tbody>
</table>

SDS Number: 100000102070
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, Dusts and Mists. 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: Lightweight protective clothing.

Hygiene measures: General industrial hygiene practice. Prevent vapor buildup by providing adequate ventilation during and after use. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance
Form: Oil
Physical state: Liquid
Color: clear, light

Safety data
Flash point: 250 °C (482 °F)
Method: ASTM D-92
Ignition temperature: 310 °C (590 °F)
Lower explosion limit: No data available
Upper explosion limit: No data available
Thermal decomposition: No data available

Molecular formula: Polymer
Molecular weight: Varies
pH: No data available
Synfluid® mPAO 150 cSt

Freezing point: -39 °C (-38 °F)

Boiling point/boiling range: > 250 °C (> 482 °F)

Density: 0.84 g/cm³

Water solubility: Soluble in hydrocarbon solvents; insoluble in water.

Viscosity, kinematic: 1700 cSt at 40 °C (104 °F)

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: Further information: No decomposition if stored and applied as directed.

Conditions to avoid: No data available.

Materials to avoid: No data available.

Thermal decomposition: No data available.

Hazardous decomposition products: Carbon oxides

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

SECTION 11: Toxicological information

Synfluid® mPAO 150 cSt

Acute oral toxicity: LD50: > 5,000 mg/kg
Species: Rat
Information given is based on data obtained from similar substances.

Synfluid® mPAO 150 cSt

Acute inhalation toxicity: LC50: > 5 mg/l
Exposure time: 4 h
Species: Rat
Synfluid® mPAO 150 cSt

Test atmosphere: dust/mist
Information given is based on data obtained from similar substances.

**Synfluid® mPAO 150 cSt**

**Acute dermal toxicity**
- LD50: > 2,000 mg/kg
- Species: Rabbit
Information given is based on data obtained from similar substances.

**Synfluid® mPAO 150 cSt**

**Skin irritation**
- No skin irritation

**Synfluid® mPAO 150 cSt**

**Eye irritation**
- No eye irritation

**Synfluid® mPAO 150 cSt**

**Sensitization**
- Did not cause sensitization on laboratory animals.

**Synfluid® mPAO 150 cSt**

**Further information**
- No data available.

**SECTION 12: Ecological information**

**Ecotoxicity effects**

**Toxicity to fish**
- This material is not expected to be harmful to aquatic organisms.
Information given is based on data obtained from similar substances.

**Toxicity to daphnia and other aquatic invertebrates**
- This material is not expected to be harmful to aquatic organisms.
Information given is based on data obtained from similar substances.

**Toxicity to algae**
- This material is not expected to be harmful to aquatic organisms.
Information given is based on data obtained from similar substances.

**Biodegradability**
- This material is not expected to be readily biodegradable.

**Elimination information (persistence and degradability)**

**Mobility**
- No data available

**Additional ecological information**
- No data available
Ecotoxicology Assessment

Short-term (acute) aquatic hazard: This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard: This material is not expected to be harmful to aquatic organisms.

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: Do not dispose of waste into sewer. 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.

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)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.
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Version 2.2 Revision Date 2019-11-04

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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

SECTION 15: Regulatory information

National legislation
Regulation under the Occupational Safety and Health Act
A Material Safety Datasheet (MSDS) for this product is not required according to article 41 of the ISHA.

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Chemical name</th>
<th>Threshold limits</th>
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</thead>
<tbody>
<tr>
<td>Harmful Substances Prohibited from Manufacturing</td>
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<td>Not applicable</td>
</tr>
<tr>
<td>Harmful Substances Required Permission for Manufacture</td>
<td>:</td>
<td>Not applicable</td>
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Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

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<tr>
<td>Toxic Chemicals</td>
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<tr>
<td>Prohibited Chemicals</td>
<td>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Restricted Chemicals</td>
<td>:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Toxic Release Inventory</td>
<td>:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Dangerous Substances Safety Management Act
Dangerous Substances Safety Management Act
Not Applicable to Dangerous Materials

Notification status
Europe REACH : This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH).
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 : Not in compliance with the inventory

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Korea KECI: All substances in this product were registered, notified to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was included on CPChem’s notifications or if the Importer of Record themselves notified the substances.

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

China IECSC: This product contains one or more substances that have been notified under New Substances Notification laws. However, only CPChem and other independent notifiers are approved to be the importers of record.

Taiwan TCSI: Not in compliance with the inventory.

SECTION 16: Other information

Further information

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.

<table>
<thead>
<tr>
<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
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<tr>
<td><strong>ACGIH</strong></td>
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<td><strong>IC50</strong></td>
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<td><strong>IARC</strong></td>
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<td><strong>IECSC</strong></td>
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SDS Number:100000102070
<table>
<thead>
<tr>
<th>Substances in China</th>
<th>TSCA</th>
<th>Toxic Substance Control Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
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</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
<td>UVCB</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
<td>WHMIS</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
<td>Workplace Hazardous Materials Information System</td>
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