SAFETY DATA SHEET

Synfluid® mPAO 100 cSt
Version 2.2  Revision Date 2019-11-04


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

1.1

Product information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Synfluid® mPAO 100 cSt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>1116564, 1106295, 1106303</td>
</tr>
</tbody>
</table>

EC-No. Registration number

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Octene</td>
<td>111-66-0</td>
<td>203-893-7</td>
<td>Chevron Phillips Chemical Company LP 01-2119486877-14-0006</td>
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</tbody>
</table>

1.3

Details of the supplier of the safety data sheet

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

Local: Chevron Phillips Chemicals International N.V.
Airport Plaza (Stockholm Building)
Leonardo Da Vinci laan 19
1831 Diegem
Belgium

SDS Requests: (800) 852-5530
Technical Information: (832) 813-4862
Responsible Party: Product Safety Group
Email:sds@cpchem.com

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Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
REGULATION (EC) No 1272/2008

Not a hazardous substance or mixture.

2.2 Labeling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

3.1 - 3.2 Substance or Mixture
Synonyms: Polyaalphaolefin; PAO
Molecular formula: Polymer

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. EC-No. Index No.</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [wt%]</th>
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</thead>
<tbody>
<tr>
<td>1-Octene Homopolymer, Hydrogenated</td>
<td>70693-43-5</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Contains no hazardous ingredients according to GHS.

SECTION 4: First aid measures

4.1 Description of 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.

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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

5.1 Extinguishing media

Flash point : 255 °C (491 °F)

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

Unsuitable extinguishing media : High volume water jet.

5.2 Special hazards arising from the substance or mixture

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

5.3 Advice for firefighters

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

Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire and explosion protection : Normal measures for preventive fire protection.

Hazardous decomposition products : Carbon oxides.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Material can create slippery conditions.

6.2 Environmental precautions

Environmental precautions : Clean contaminated floors and objects thoroughly while observing environmental regulations.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
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Reference to other sections: For personal protection see section 8. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling:
Advice on safe 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements for storage areas and containers: Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

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 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, 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

9.1 Information on basic physical and chemical properties

**Appearance**

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

**Safety data**

- Flash point: 255 °C (491 °F)
- 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
- Freezing point: -44 °C (-47 °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: 1014 cSt
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SECTION 10: Stability and reactivity

10.1 Reactivity: Stable at normal ambient temperature and pressure.

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

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid: No data available.

10.5 Materials to avoid: No data available.

Thermal decomposition: No data available

10.6 Hazardous decomposition products: Carbon oxides

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Synfluid® mPAO 100 cSt Acute oral toxicity: LD50: > 5,000 mg/kg Species: Rat Information given is based on data obtained from similar substances.

Synfluid® mPAO 100 cSt Acute inhalation toxicity: LC50: > 5 mg/l Exposure time: 4 h Species: Rat Test atmosphere: dust/mist Information given is based on data obtained from similar substances.

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Acute dermal toxicity: LD50: > 2.000 mg/kg
Species: Rabbit
Information given is based on data obtained from similar substances.

Skin irritation: No skin irritation

Eye irritation: No eye irritation

Sensitization: Did not cause sensitization on laboratory animals.

Further information: No data available.

SECTION 12: Ecological information

12.1 Toxicity

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.

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

Elimination information (persistence and degradability)

12.4 Mobility in soil
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Mobility : No data available

12.5 Results of PBT and vPvB assessment
Results of PBT assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
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

13.1 Waste treatment methods
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

14.1 - 14.7 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.
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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.

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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National legislation
Water contaminating class : WGK 1 slightly water endangering
(Germany)

15.2 Chemical Safety Assessment
Components : oct-1-ene A Chemical Safety Assessment has been carried out for this substance. 203-893-7

Major Accident Hazard Legislation : 96/82/EC Update: 2003 Directive 96/82/EC does not apply
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
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
NFPA Classification:
- Health Hazard: 0
- Fire Hazard: 1
- Reactivity Hazard: 0

Further information
NSF H1 Registered, meets USDA 1998 H1 Guidelines

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>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>DSH</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
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<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
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<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
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<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
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<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
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<td>PRNT</td>
<td>Presumed Not Toxic</td>
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<td>GHS</td>
<td>Globally Harmonized System</td>
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<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
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<td>STEL</td>
<td>Short-term Exposure Limit</td>
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<td>Effective Concentration 50%</td>
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<td>NOEC</td>
<td>No Observed Effect Concentration</td>
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<tr>
<td>EC50</td>
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<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
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<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
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<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
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<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
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<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
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<td>TLV</td>
<td>Threshold Limit Value</td>
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<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
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<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
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<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
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<td>&lt;=</td>
<td>Less Than or Equal To</td>
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<td>LC50</td>
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