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

Product information
Product Name: Synfluid® PAO 2 cSt
Material: 1111737, 1111736, 1111732, 1082190, 1079695, 1079661, 1079651, 1079671

Use: Synthetic Lubricants

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

: Acute toxicity, Category 4, Inhalation
  Aspiration hazard, Category 1

Labeling

SDS Number:100000010948 1/11
Symbol(s): [Danger]

Signal Word: Danger

Hazard Statements:
- H304: May be fatal if swallowed and enters airways.
- H332: Harmful if inhaled.

Precautionary Statements:
- Prevention:
  - P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
  - P271: Use only outdoors or in a well-ventilated area.
- Response:
  - P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
  - P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - P312: Call a POISON CENTER/doctor if you feel unwell.
  - P331: Do NOT induce vomiting.
- Storage:
  - P405: Store locked up.
- Disposal:
  - P501: Dispose of contents/container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms:
- 1-Decene, Dimer, Hydrogenated
- Synfluid PAO 2 CST
- PAO 2 MIL
- PolyalPHAolefin
- PAO

Molecular formula: UVCB

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration</th>
<th>ENCS/ISHL number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Decene, Dimer, Hydrogenated</td>
<td>68649-11-6</td>
<td>100%</td>
<td>6-1109</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. Do not leave the victim unattended. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled: Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

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

In case of eye contact: Flush eyes with water as a precaution. Remove contact.
If swallowed: Keep respiratory tract clear. Do NOT induce vomiting. If symptoms persist, call a physician.

SECTION 5: Firefighting measures

Flash point: 160°C (320°F)
Method: Cleveland Open Cup

Autoignition temperature: 324°C (615°F)

Unsuitable extinguishing media: High volume water jet.

Specific hazards during firefighting: Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.

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

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: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Advice on safe handling: Do not breathe vapors/dust. 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

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

Use: Synthetic Lubricants

**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 Dusts and Mists / P100. 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**: Safety glasses. Eye wash bottle with pure water.

- **Skin and body protection**: Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate: Protective suit. Safety shoes.

- **Hygiene measures**: General industrial hygiene practice.

- **Protective measures**: Wear suitable protective equipment. When using do not eat, drink or smoke.
## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

#### Appearance
- **Physical state**: Liquid
- **Color**: Clear, Colorless
- **Odor**: Odorless

#### Safety data
- **Flash point**: 160°C (320°F)
  - Method: Cleveland Open Cup
- **Lower explosion limit**: Not applicable
- **Upper explosion limit**: Not applicable
- **Oxidizing properties**: no
- **Autoignition temperature**: 324°C (615°F)
- **Molecular formula**: UVCB
- **Molecular weight**: Varies
- **pH**: Not applicable
- **Freezing point**: -73°C (-99°F)

#### Boiling point/boiling range
- **Boiling point**: 223°C (433°F)

#### Vapor pressure
- **Vapor pressure**: 1.00 MMHG
  - at 75°C (167°F)

#### Relative density
- **Relative density**: 0.8
  - at 15.6 °C (60.1 °F)

#### Density
- **Density**: 795.7 g/l

#### Water solubility
- **Water solubility**: Soluble in hydrocarbon solvents; insoluble in water.

#### Partition coefficient: n-octanol/water
- **Partition coefficient**: No data available

#### Relative vapor density
- **Relative vapor density**: 9
  - (Air = 1.0)

#### Evaporation rate
- **Evaporation rate**: No data available

## 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: Reacts violently with water.

**Conditions to avoid**

No data available.

**Materials to avoid**

May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Oxidizing solids. Oxidizing liquids.

### Other data

- No decomposition if stored and applied as directed.

### SECTION 11: Toxicological information

**Synfluid® PAO 2 cSt**

**Acute oral toxicity**

- LD50: >5000 mg/kg Species: Rat
- Sex: male and female

**Synfluid® PAO 2 cSt**

**Acute inhalation toxicity**

- LC50: 1.17 mg/l
- Exposure time: 4 h
- Species: Rat
- Test atmosphere: dust/mist

**Synfluid® PAO 2 cSt**

**Acute dermal toxicity**

- LD50: > 3 g/kg
- Species: Rabbit
- Sex: Not Specified

**Synfluid® PAO 2 cSt**

**Skin irritation**

- No skin irritation

**Synfluid® PAO 2 cSt**

**Eye irritation**

- No eye irritation

**Synfluid® PAO 2 cSt**

**Sensitization**

- Did not cause sensitization on laboratory animals.
### Synfluid® PAO 2 cSt

**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**
- 1-Decene, Dimer, Hydrogenated
  - Carcinogenicity: Not classifiable as a human carcinogen.
  - Mutagenicity: Contains no ingredient listed as a mutagen
  - Teratogenicity: No toxicity to reproduction
  - Reproductive toxicity: No toxicity to reproduction

### SECTION 12: Ecological information

**Ecotoxicity effects**

**Toxicity to fish**
- 1-Decene, Dimer, Hydrogenated
  - LL50: > 1,000 mg/l
  - Exposure time: 96 h
  - Species: Oncorhynchus mykiss (rainbow trout)
  - semi-static test Test substance: yes
  - The product has low solubility in the test medium. An aqueous dispersion was tested.

**Toxicity to daphnia and other aquatic invertebrates**
- 1-Decene, Dimer, Hydrogenated
  - EL50: > 1,000 mg/l
  - Exposure time: 48 h
  - Species: Daphnia magna (Water flea)
  - static test Test substance: yes
  - The product has low solubility in the test medium. An aqueous dispersion was tested.

**Toxicity to algae**
- 1-Decene, Dimer, Hydrogenated
  - EL50: > 1,000 mg/l
  - Exposure time: 72 h
  - Species: Scenedesmus capricornutum (fresh water algae)
  - static test Test substance: yes
  - The product has low solubility in the test medium. An aqueous dispersion was tested.

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**
- 1-Decene, Dimer, Hydrogenated
  - NOEC: 125 mg/l
  - Exposure time: 21 d
  - Species: Daphnia magna (Water flea)
  - Test substance: yes
  - The product has low solubility in the test medium. An aqueous dispersion was tested.
Biodegradability : Expected to be inherently biodegradable.

Elimination information (persistence and degradability)

Mobility : No data available

Results of PBT assessment
1-Decene, Dimer, Hydrogenated : This substance is not considered to be persistent, bioaccumulating and toxic (PBT),. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Additional ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
1-Decene, Dimer, Hydrogenated : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard
1-Decene, Dimer, Hydrogenated : 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.
SAFETY DATA SHEET

Synfluid® PAO 2 cSt

Version 1.8

Revision Date 2020-02-17

**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.

**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**

<table>
<thead>
<tr>
<th>National legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poisonous and Deleterious Substances Control Law</td>
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<table>
<thead>
<tr>
<th>Industrial Safety and Health Law</th>
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</thead>
<tbody>
<tr>
<td>Substances Subject to be Notified Names</td>
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<tr>
<td>: Not relevant</td>
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<tr>
<td>Hazardous Substances Subject to Labeling Requirements</td>
</tr>
<tr>
<td>: Not relevant</td>
</tr>
<tr>
<td>Ordinance on Prevention of Organic Solvent Poisoning</td>
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<tr>
<td>: Not relevant</td>
</tr>
</tbody>
</table>

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Synfluid® PAO 2 cSt

Version 1.8

Revision Date 2020-02-17

Chemical Substance Control Law

: Not relevant

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

: Not relevant

Other regulations

Fire Service Law

: Flammable liquids
Type 3 petroleums
Hazardous rank III

Notification status

Europe REACH

: On the inventory, or in compliance with the inventory
Switzerland CH INV

: On the inventory, or in compliance with the inventory
United States of America (USA)

: On or in compliance with the active portion of the
TSCA

: 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
Notification number: HSR002606
Japan ENCS

: On the inventory, or in compliance with the inventory
Notification number: (6)-1109
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.
Notification number: KE-09501
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

: 3331

NSF H1, HX-1 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.

<table>
<thead>
<tr>
<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
<th></th>
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<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of</td>
</tr>
<tr>
<td></td>
<td>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>
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<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
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<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
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<td>NFPA</td>
<td>National Fire Protection Agency</td>
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<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
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<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
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<td>CNS</td>
<td>Central Nervous System</td>
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<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
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<td>CAS</td>
<td>Chemical Abstract Service</td>
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<td>NZIoC</td>
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<td>EC50</td>
<td>Effective Concentration</td>
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<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
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<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<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>
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<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
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<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
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<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
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<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
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<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
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<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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<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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<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
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<td>TWA</td>
<td>Time Weighted Average</td>
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<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
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<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
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<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
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<td>&lt;=</td>
<td>Less Than or Equal To</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
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<td>Lethal Concentration 50%</td>
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