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

1.1 Product information

Product Name: Synfluid® PAO 8 cSt HVI
Material: 1116770, 1116769, 1079706, 10603520

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index No.</th>
<th>Legal Entity Registration number</th>
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<tr>
<td>1-Dodecene</td>
<td>112-41-4</td>
<td>203-968-4</td>
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<td>Chevron Phillips Chemical Company LP 01-2119475509-26-0003</td>
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</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 Vincielaan 19
1831 Diegem
Belgium

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

1.4 Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
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 according to Regulation (EC) No 1272/2008.

Additional Labeling:
The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 0 %

SECTION 3: Composition/information on ingredients

3.1 - 3.2 Substance or Mixture

Synonyms:
- PAO 8A
- Polyalphaolefin
- PAO
- PAO 8 cSt Blend

Molecular formula: UVCB

Contains no hazardous ingredients according to GHS.

Remarks: 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. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Show this material safety data sheet to the doctor in attendance.

If inhaled: Move to fresh air in case of accidental inhalation of vapors.

SDS Number: 100000014143
**Synfluid® PAO 8 cSt HVI**

**Version 1.9**

**Revision Date 2019-11-25**

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consult a physician after significant exposure.</strong></td>
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</tbody>
</table>

**In case of skin contact**
Remove contaminated clothing. If irritation develops, get medical attention. Wash off immediately with plenty of water.

**In case of eye contact**
Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

**If swallowed**
If swallowed, DO NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

### SECTION 5: Firefighting measures

- **Flash point**
  246-271°C (475-520°F)
  Method: Cleveland Open Cup

- **Autoignition temperature**
  351°C (664°F)

#### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

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

#### 5.3 Advice for firefighters

- **Special protective equipment for fire-fighters**
  In the event of fire, wear self-contained breathing apparatus.

- **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**
Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.

#### 6.2 Environmental precautions
Environmental precautions : No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Methods for cleaning up : Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly while observing environmental regulations.

Additional advice : No conditions to be specially mentioned.

6.4 Reference to other sections
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 : 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.

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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls
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.

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

Protective measures : Wear suitable protective equipment. When using do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Form : Liquid
Physical state : Liquid
Color : Colorless
Odor : Odorless

Safety data
Flash point : 246-271°C (475-520°F)
Method: Cleveland Open Cup
Lower explosion limit : No data available
Upper explosion limit : No data available
Oxidizing properties : no
Autoignition temperature : 351°C (664°F)
Molecular formula : UVCB
Molecular weight : Not applicable
pH : Not applicable
Pour point : <50°C (<58°F)
Boiling point/boiling range : >260°C (>500°F)
Vapor pressure : No data available

Density : 6.87 - 6.96 L/G

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

Viscosity, kinematic : 46.2 cSt at 40°C (104°F)
Method: ASTM D 445

Relative vapor density : No data available

Evaporation rate : No data available

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 : Hazardous reactions: No dangerous reaction known under conditions of normal use.

Hazardous reactions: Hazardous polymerization does not occur.

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

10.4
Conditions to avoid : No data available.

10.5
Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

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® PAO 8 cSt HVI
Acute oral toxicity : LD50: > 5,000 mg/kg
Species: Rat
Information given is based on data obtained from similar substances.

Synfluid® PAO 8 cSt HVI
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.

Synfluid® PAO 8 cSt HVI
Acute dermal toxicity : LD50: > 2,000 mg/kg
Species: Rat
Information given is based on data obtained from similar substances.

Synfluid® PAO 8 cSt HVI
Skin irritation : No skin irritation
Information given is based on data obtained from similar substances.

Synfluid® PAO 8 cSt HVI
Eye irritation : No eye irritation
Information given is based on data obtained from similar substances.

Synfluid® PAO 8 cSt HVI
Sensitization : Did not cause sensitization on laboratory animals.
Information given is based on data obtained from similar substances.

Synfluid® PAO 8 cSt HVI
Repeated dose toxicity : Species: Rat, Male and female
Sex: Male and female
Application Route: oral gavage
Dose: 0, 1000 mg/kg/day
Exposure time: 28 days
NOEL: 1,000 mg/kg
Method: OECD Test Guideline 407
Information given is based on data obtained from similar substances.

Synfluid® PAO 8 cSt HVI
Genotoxicity in vitro : Test Type: Ames test
Result: negative
Remarks: Information refers to the main ingredient.
**Synfluid® PAO 8 cSt HVI**

**Genotoxicity in vitro**  
Test Type: Chromosome aberration test in vitro  
Result: negative  
Remarks: Information refers to the main ingredient.

**Synfluid® PAO 8 cSt HVI**  
Genotoxicity in vivo  
: Test Type: Mouse micronucleus assay  
Result: negative  
Remarks: Information refers to the main ingredient.

**Synfluid® PAO 8 cSt HVI**  
Aspiration toxicity  
: No aspiration toxicity classification.

**Synfluid® PAO 8 cSt HVI**  
CMR effects  
: Carcinogenicity:  
Not classifiable as a human carcinogen.  
Mutagenicity:  
Animal testing did not show any mutagenic effects.  
Teratogenicity:  
Did not show teratogenic effects in animal experiments.  
Reproductive toxicity:  
No toxicity to reproduction

**SECTION 12: Ecological information**

12.1  
**Toxicity**  
Ecotoxicity effects  

**Toxicity to fish**  
: LL50: > 1.000 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
static test Test substance: no  
Method: OECD Test Guideline 203  
Information given is based on data obtained from similar substances.

**Toxicity to daphnia and other aquatic invertebrates**  
: EL50: > 1.000 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
static test Test substance: no  
Method: OECD Test Guideline 202  
Information given is based on data obtained from similar substances.

**Toxicity to algae**  
: NOEC: > 1.000 mg/l  
Exposure time: 96 h  
Species: Selenastrum capricornutum (algae)  
Method: OECD Test Guideline 201  
Information given is based on data obtained from similar substances.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

- NOEC: 125 mg/l
- Exposure time: 21 d
- Species: Daphnia magna (Water flea)
- Test substance: no
- The product has low solubility in the test medium. An aqueous dispersion was tested.
- 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.
- Expected to be ultimately biodegradable

12.3 Bioaccumulative potential

Elimination information (persistence and degradability)

12.4 Mobility in soil

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

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.

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

Other information : Polyolefin (molecular weight 300+) (n), S.T. 2, Cat.Y
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: dodec-1-ene A Chemical Safety Assessment has been carried out for this substance. 203-968-4

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: Not in compliance with the inventory
United States of America (USA): On or in compliance with the active portion of the TSCA
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
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: On the inventory, or in compliance with the inventory
Taiwan TCSI: On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification: Health Hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0
Further information

Legacy SDS Number : 8014

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.

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>
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<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
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<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
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<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
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<tr>
<td>CNS</td>
<td>Central Nervous System</td>
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<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
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<tr>
<td>EC50</td>
<td>Effective Concentration</td>
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<td>EC50%</td>
<td>Effective Concentration 50%</td>
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<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
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<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
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<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
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<td>GHS</td>
<td>Globally Harmonized System</td>
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<td>IC50</td>
<td>Inhibition Concentration 50%</td>
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<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<td>Japan, Inventory of Existing and New Chemical Substances</td>
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<td>Korea, Existing Chemical Inventory</td>
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<td>LD50</td>
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<td>Lowest Observed Adverse Effect Level</td>
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<td>NFPA</td>
<td>National Fire Protection Agency</td>
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<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
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<td>NTP</td>
<td>National Toxicology Program</td>
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<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
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<td>NOAEL</td>
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<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</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>Superfund Amendments and Reauthorization Act.</td>
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<td>Threshold Limit Value</td>
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<td>Time Weighted Average</td>
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<td>TSCA</td>
<td>Toxic Substance Control Act</td>
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<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
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<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
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