



Synfluid® PAO 2.5 cSt

Version 1.2

Revision Date 2010-11-12

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : Synfluid® PAO 2.5 cSt
 Material : 1079862, 1079691

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

Local : Chevron Phillips Chemicals International N.V.
 Brusselsesteenweg 355
 B-3090 Overijse
 Belgium

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

Emergency telephone:

Health:

866.442.9628 (North America)
 1.832.813.4984 (International)

Transport:

North America: CHEMTREC 800.424.9300 or 703.527.3887
 Asia: +800 CHEMCALL (+800 2436 2255) China: 0532.8388.9090
 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group
 E-mail address : MSDS@CPChem.com
 Website : www.CPChem.com

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Chronic aquatic toxicity, Category 4	H413: May cause long lasting harmful effects to aquatic life.

Classification (67/548/EEC, 1999/45/EC)


Harmful	R20: Harmful by inhalation.
	R53: May cause long-term adverse effects in the aquatic environment.

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Label elements**Labeling (REGULATION (EC) No 1272/2008)**

Hazard pictograms	:																	
Signal Word	:	Danger																
Hazard Statements	:	<table> <tr> <td>H304</td> <td>May be fatal if swallowed and enters airways.</td> </tr> <tr> <td>H332</td> <td>Harmful if inhaled.</td> </tr> <tr> <td>H413</td> <td>May cause long lasting harmful effects to aquatic life.</td> </tr> </table>	H304	May be fatal if swallowed and enters airways.	H332	Harmful if inhaled.	H413	May cause long lasting harmful effects to aquatic life.										
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Precautionary Statements	:	<table> <tr> <td>Prevention:</td> <td></td> </tr> <tr> <td>P261</td> <td>Avoid breathing dust/fume/gas/mist/vapors/spray.</td> </tr> <tr> <td>P271</td> <td>Use only outdoors or in a well-ventilated area.</td> </tr> <tr> <td>P273</td> <td>Avoid release to the environment.</td> </tr> <tr> <td>Response:</td> <td></td> </tr> <tr> <td>P301 + P310</td> <td>IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.</td> </tr> <tr> <td>P304 + P340</td> <td>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</td> </tr> <tr> <td>P331</td> <td>Do NOT induce vomiting.</td> </tr> </table>	Prevention:		P261	Avoid breathing dust/fume/gas/mist/vapors/spray.	P271	Use only outdoors or in a well-ventilated area.	P273	Avoid release to the environment.	Response:		P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	P331	Do NOT induce vomiting.
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Hazardous ingredients which must be listed on the label:

- 151006-61-0 1-Dodecene, Dimer Hydrogenated

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms	:	1-Dodecene, Dimer, Hydrogenated Polyalphaolefin
Molecular formula	:	UVCB

Mixtures**Hazardous ingredients**

Chemical Name	CAS-No. EINECS-No.	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
1-Dodecene, Dimer Hydrogenated	151006-61-0	Xn; R20 R53 Xn; R65	Asp. Tox. 1; H304 Acute Tox. 4; H332 Aquatic Chronic 4; H413	100

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

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4. FIRST AID MEASURES

- General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may only appear several hours later. Do not leave the victim unattended.
- 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 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 induce vomiting. If symptoms persist, call a physician.

5. FIRE-FIGHTING MEASURES

- Flash point : 186 °C (367 °F)
Method: Cleveland Open Cup
- Autoignition temperature : 324 °C (615 °F)
- 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 fire fighting 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.
- Fire and explosion protection : Normal measures for preventive fire protection.
- Hazardous decomposition products : Carbon oxides.

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.

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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.

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. 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment**

Respiratory protection : In the case of vapor formation use a respirator with an approved filter.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : General industrial hygiene practice.

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 : 186 °C (367 °F)

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	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	: -52 °C (-62 °F)
Boiling point/boiling range	: 277 °C (531 °F)
Vapor pressure	: 1,00 MMHG at 150 °C (302 °F)
Density	: 806,8 G/L
Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 8,3 cSt at 40 °C (104 °F)
Relative vapor density	: 10 (Air = 1.0)
Evaporation rate	: No data available

10. STABILITY AND REACTIVITY**Possibility of hazardous reactions**

Conditions to avoid	: No data available.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Other data	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION**Acute oral toxicity**

1-Dodecene, Dimer Hydrogenated	: LD50 Oral: > 5.000 mg/kg Species: rat
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Test substance: yes

Acute inhalation toxicity

1-Dodecene, Dimer : LC50: 1,71 mg/l
 Hydrogenated : Exposure time: 4 HR
 Species: rat
 Sex: female
 Test substance: yes

LC50: > 5,06 mg/l
 Exposure time: 4 HR
 Species: rat
 Sex: male
 Test substance: yes

Acute dermal toxicity

1-Dodecene, Dimer : LD50 Dermal: > 2.000 mg/kg
 Hydrogenated : Species: rat
 Test substance: yes

Skin irritation

1-Dodecene, Dimer : No skin irritation
 Hydrogenated

Eye irritation

1-Dodecene, Dimer : No eye irritation
 Hydrogenated

Sensitization

1-Dodecene, Dimer : Did not cause sensitization on laboratory animals.
 Hydrogenated

Repeated dose toxicity

1-Dodecene, Dimer : Species: rat
 Hydrogenated : Application Route: oral gavage
 Dose: 0 up to 1000 mg/kg
 Exposure time: 28 day
 Number of exposures: daily
 NOEL: 1.000 mg/kg

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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.

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Further information : Solvents may degrease the skin.

12. ECOLOGICAL INFORMATION**Toxicity to fish**

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1-Dodecene, Dimer Hydrogenated : LL50: > 1.000 mg/l
 Exposure time: 96 HR
 Species: Oncorhynchus mykiss (rainbow trout)
 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-Dodecene, Dimer Hydrogenated : EL50: > 1.000 mg/l
 Exposure time: 48 HR
 Species: Daphnia magna (Water flea)
 Test substance: yes
 The product has low solubility in the test medium. An aqueous dispersion was tested.

Toxicity to algae

1-Dodecene, Dimer Hydrogenated : EbC50: > 1.000 mg/l
 Exposure time: 96 HR
 Species: Selenastrum capricornutum (algae)
 Test substance: yes
 The product has low solubility in the test medium. An aqueous dispersion was tested.

Biodegradability

1-Dodecene, Dimer Hydrogenated : Expected to be inherently biodegradable.

Further information on ecology

Additional ecological information : May cause long lasting harmful effects to aquatic life.

13. DISPOSAL CONSIDERATIONS

The information in this MSDS 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 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.

14. TRANSPORT INFORMATION

The shipping descriptions shown here are for bulk shipments only, and may not apply to

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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 MSDS and the bill of lading.

USDOT

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

IMO / IMDG

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

IATA

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

ADR

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

RID

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

15. REGULATORY INFORMATION**National legislation**

Major Accident Hazard : 96/82/EC Update: 2003
Legislation Directive 96/82/EC does not apply

Notification status

Europe REACH	: On the inventory, or in compliance with the inventory
United States of America TSCA	: On the inventory, or in compliance with the inventory
Canada DSL	: On the inventory, or in compliance with the inventory
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	: Not in compliance with the inventory
Philippines PICCS	: On the inventory, or in compliance with the inventory
China IECSC	: On the inventory, or in compliance with the inventory

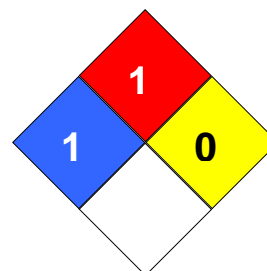
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16. OTHER INFORMATION

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

**Further information**

Legacy MSDS Number : 5939

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 MSDS pertains only to the product as shipped.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LOAEL	Lowest Observed Adverse Effect Level
AICS	Australia, Inventory of Chemical Substances	NFPA	National Fire Protection Agency
DSL	Canada, Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
NDSL	Canada, Non-Domestic Substances List	NTP	National Toxicology Program
CNS	Central Nervous System	NZIoC	New Zealand Inventory of Chemicals
CAS	Chemical Abstract Service	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration	NOEC	No Observed Effect Concentration
EC50	Effective Concentration 50%	OSHA	Occupational Safety & Health Administration
EINECS	European Inventory of Existing Chemical Substances	PEL	Permissible Exposure Limit
MAK	Germany Maximum Concentration Values	PICCS	Philippines Inventory of Commercial Chemical Substances
GHS	Globally Harmonized System	PRNT	Presumed Not Toxic
>=	Greater Than or Equal To	RCRA	Resource Conservation Recovery Act
IC50	Inhibition Concentration 50%	STEL	Short-term Exposure Limit
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act.
IECSC	Inventory of Existing Chemical Substances in China	TLV	Threshold Limit Value
ENCS	Japan, Inventory of Existing and New Chemical Substances	TWA	Time Weighted Average
KECI	Korea, Existing Chemical Inventory	TSCA	Toxic Substance Control Act
<=	Less Than or Equal To	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials

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LC50	Lethal Concentration 50%	WHMIS	Workplace Hazardous Materials Information System
LD50	Lethal Dose 50%		

Full text of R-phrases referred to under sections 2 and 3

R20 Harmful by inhalation.
R53 May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3.

H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H413 May cause long lasting harmful effects to aquatic life.