



Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Synfluid® PAO 4 cSt

Product Use: Synthetic Lubricants

Product Number(s): 0001079895, 0001079894, 0001079673, 0001079872, 0001079835, 0001079702, 0001079928, 0001079712

Synonyms: Polyalphaolefin; PAO

Product CAS No.: 68037-01-4

Company Identification:

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

Product Information:

MSDS Requests: 1 - (800) 852-5530
Technical Information: 1 - (800) 852-5531
Responsible Party: Product Safety Group
Email:msds@cpchem.com

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

24-Hour Emergency Telephone NumbersHEALTH:Chevron Phillips Emergency Information Center 866.442.9628 (North America) and 1.832.813.4984 (International)

TRANSPORTATION: North America: CHEMTREC 800.424.9300 or 703.527.3887
ASIA: +1.703.527.3887
EUROPE: BIG .32.14.584545 (phone) or .32.14.583516 (telefax)
SOUTH AMERICA SOS-Cotec Inside Brazil: 0800.111.767
Outside Brazil: 55.19.3467.1600

SECTION 2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear, colorless, odorless liquid.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

GHS Classification and Labeling:

Aspiration toxicant: Category 1.

Signal Word: Danger



GHS Symbol:

Health Hazards: May be fatal if swallowed and enters airways.

Precautionary Hazard - Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician

Precautionary Hazard - Storage: Store locked up.

Precautionary Hazard - Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

EU Classification:

This material is not classified as hazardous under EU Criteria.

IMMEDIATE HEALTH EFFECTS:

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed. This material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

Inhalation: Contains a synthetic hydrocarbon base oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	AMOUNT	EINECS / ELINCS	SYM	R-PHRASE S
1-Decene Homopolymer Hydrogenated	68037-01-4	100 % weight	500-183-1	NA	NA

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
1-Decene Homopolymer Hydrogenated	CPCHEM	5 mg/m3	NA	NA	NA

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.

Skin: To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop.

Ingestion: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: 219°C (426.2°F) (Cleveland Open Cup)

Autoignition: 343

Flammability (Explosive) Limits (% by volume in air): Lower: NA Upper: NA

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL . REFER TO PRODUCT LABEL OR MANUFACTURERS TECHNICAL BULLETINS FOR THE PROPER USE AND HANDLING OF THIS MATERIAL .

Precautionary Measures: Keep out of the reach of children.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations, which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids, National Fire Protection Association (NFPA 77), Recommended Practice on Static Electricity' (liquids, powders and dusts), and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents' (liquids).

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), 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:

Eye/Face Protection: Wear eye protection such as safety glasses, chemical goggles, or faceshields if engineering controls or work practices are not adequate to prevent eye contact.

Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include: Nitrile

Respiratory Protection: If user operations generate an oil mist, determine if airborne concentrations are below the OSHA Permissible Limit (PEL) of 5 mg/m³ for mineral oil mist. If not, wear a NIOSH approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
1-Decene Homopolymer Hydrogenated	CPCHEM	5 mg/m ³	NA	NA	NA

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, colorless, odorless liquid.

Autoignition: 343

Boiling Point: 414°C (777.2°F)

Evaporation Rate: NDA

Flammability (Explosive) Limits (% by volume in air): Lower: NA Upper: NA

Flashpoint: 219°C (426.2°F) (Cleveland Open Cup)

Molecular Formula: Mixture

Molecular Weight: NDA

Melting Point: NDA

Octanol / Water Partition Coefficient: log-Kow: NDA

pH: NA

Pour Point : -73°C (-99.4°F)

Solubility (in water): Soluble in hydrocarbon solvents; insoluble in water.

Specific Gravity: 0.82 @ 15.6 °C (60.1°F)

Vapor Pressure: 1.7 mmHg @ 177 °C (351°F)

Vapor Density (AIR=1): >10

Viscosity: 16 cSt @ 37.8 °C (100°F)

Percent Volatile: NDA

SECTION 10 STABILITY AND REACTIVITY

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

Conditions to Avoid: No Data Available

Incompatibility With Other Materials: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: No Data.

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS:

Acute Oral Toxicity: LD50 / rat / > 5000 mg/kg / based on data for a similar material.

Acute Dermal Toxicity: LD50 / rat / > 2000 mg/kg

Acute Inhalation Toxicity: LC50 / not known / based on data for a similar material.

Eye Irritation: This material is not expected to be irritating to the eyes.

Skin Irritation: This material is not expected to be irritating to the skin.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains SYNTHETIC BASE OILS.

These oils are not refined from petroleum base stocks. The potential of base oil prepared by this process to cause cancer has not been specifically addressed by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the International Agency for Research on Cancer (IARC), nor the National Toxicology Program (NTP) Annual Report. However, the process conditions, chemical analysis, and the negative results of mutagenicity tests on similar materials support our opinion that these oils should not cause cancer.

SYNFLUID 4 cSt PAO

Genotoxicity: AMES = Negative

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY:

This material is not expected to be harmful to aquatic organisms.

- 96 hour(s) / LC50 / fathead minnow (*Pimephales promelas*) / >750 mg/l
- 48 hour(s) / EC50 / water flea (*Daphnia magna*) / 190 mg/l
- 96 hour(s) / LC50 / Rainbow trout (*Salmo gairdneri*) / >1000 mg/l

ENVIRONMENTAL FATE:

This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

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.

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 MSDS and the bill of lading.

Shipping Descriptions per regulatory authority.

US DOT

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

ICAO / IATA

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

IMO / IMDG

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

RID / ADR

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

SECTION 15 REGULATORY INFORMATION

SARA 311/312 CATEGORIES:

- 1. Immediate (Acute) Health Effects: NO
- 2. Delayed (Chronic) Health Effects: NO
- 3. Fire Hazard: NO
- 4. Sudden Release of Pressure Hazard: NO
- 5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

- | | | |
|-----------------------------|----------------------------|-------------------------------|
| 01 = CA Prop 65 | 17 = FDA 178 | 33 = RCRA Waste Appendix VIII |
| 02 = LA RTK | 18 = FDA 179 | 34 = RCRA Waste D-List |
| 03 = MA RTK | 19 = FDA 180 | 35 = RCRA Waste P-List |
| 04 = MN Hazardous Substance | 20 = FDA 181 | 36 = RCRA Waste U-List |
| 05 = NJ RTK | 21 = FDA 182 | 37 = SARA Section 302 |
| 06 = PA RTK | 22 = FDA 184 | 38 = SARA Section 313 |
| 07 = CAA Section 112 HAPs | 23 = FDA 186 | 39 = TSCA 12 (b) |
| 08 = CWA Section 307 | 24 = FDA 189 | 40 = TSCA Section 4 |
| 09 = CWA Section 311 | 25 = IARC Group 1 | 41 = TSCA Section 5(a) |
| 10 = DOT Marine Pollutant | 26 = IARC Group 2A | 42 = TSCA Section 8(a) CAIR |
| 11 = FDA 172 | 27 = IARC Group 2B | 43 = TSCA Section 8(a) PAIR |
| 12 = FDA 173 | 28 = IARC Group 3 | 44 = TSCA Section 8(d) |
| 13 = FDA 174 | 29 = IARC Group 4 | 45 = WHIMS - IDL |
| 14 = FDA 175 | 30 = NTP Carcinogen | 46 = Germany D TAL |
| 15 = FDA 176 | 31 = OSHA Carcinogen | 47 = Germany WKG |
| 16 = FDA 177 | 32 = OSHA Highly Hazardous | 48 = DEA List 1 |
| | | 49 = DEA List 2 |

No components of this material were found on the regulatory lists above.

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

CHEMICAL INVENTORY LISTINGS:

AUSTRALIA	YES (AUS)
CANADA	YES (DSL)
CHINA	YES (IECSC)
EUROPEAN UNION	YES (EINECS)
JAPAN	YES (ENCS)
KOREA	YES (ECL)
PHILIPPINES	YES (PICCS)
UNITED STATES	YES (TSCA)

EU LABELING:

This material is not classified as hazardous under EU Criteria.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0 Special: NA

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *-Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA).

REVISION STATEMENT: This MSDS was updated to include a GHS review.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	PEL	- Permissible Exposure Limit
ACGIH	- American Conference of Government Industrial Hygienists	OSHA	- Occupational Safety & Health Administration
NIOSH	- National Institute for Occupational Safety & Health	NFPA	- National Fire Protection Agency
WHMIS	- Workplace Hazardous Materials Information System	IARC	- Intl. Agency for Research on Cancer
EINECS	- European Inventory of existing Commercial Chemical Substances	RCRA	- Resource Conservation Recovery Act
SARA	- Superfund Amendments and Reauthorization Act.	TSCA	- Toxic Substance Control Act
EC50	- Effective Concentration	LC50	- Lethal Concentration
LD50	- Lethal Dose	CAS	- Chemical Abstract Service
NDA	- No Data Available	NA	- Not Applicable
<=	- Less Than or Equal To	>=	- Greater Than or Equal To
CNS	- Central Nervous System	MAK	- Germany Maximum Concentration Values

This data sheet is prepared according to the latest adaptation of the EEC Guideline 67/548.

This data sheet is prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This data sheet is prepared according to the ANSI MSDS Standard (Z400.1).

This data sheet was prepared by EHS Product Stewardship Group, Chevron Phillips Chemical Company LP, 10001 Six Pines Drive, The Woodlands, TX 77380.

This data sheet is prepared according to the Globally Harmonized System (GHS).

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.