SAFETY DATA SHEET

Synfluid® Dimer C12
Version 1.8
Revision Date 2019-09-05

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

Product information
Product Name: Synfluid® Dimer C12
Material: 1079709, 1079650

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
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

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

Labeling

SDS Number: 100000014082 1/12
Synfluid® Dimer C12

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 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.

Carcinogenicity:
IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3: Composition/information on ingredients

Synonyms : PAO, Polyalphaolefin
Molecular formula : (C12H24)2

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight %</th>
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<tbody>
<tr>
<td>1-Dodecene, Dimer Unhydrogenated</td>
<td>62132-67-6</td>
<td>100</td>
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</table>

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.

In case of eye contact : Flush eyes with water as a precaution. Remove contact...

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lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed:
- Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
- Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
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<tbody>
<tr>
<td>Flash point</td>
<td>186 °C (367 °F)</td>
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<tr>
<td>Autoignition temperature</td>
<td>341 °C (646 °F)</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>High volume water jet.</td>
</tr>
<tr>
<td>Specific hazards during firefighting</td>
<td>Standard procedure for chemical fires.</td>
</tr>
<tr>
<td>Special protective equipment for fire-fighters</td>
<td>Wear self-contained breathing apparatus for firefighting if necessary.</td>
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<tr>
<td>Further information</td>
<td>Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</td>
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<tr>
<td>Fire and explosion protection</td>
<td>Normal measures for preventive fire protection.</td>
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</tbody>
</table>

SECTION 6: Accidental release measures

<table>
<thead>
<tr>
<th>Precaution</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Personal precautions</td>
<td>Use personal protective equipment. Ensure adequate ventilation.</td>
</tr>
<tr>
<td>Environmental precautions</td>
<td>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.</td>
</tr>
<tr>
<td>Methods for cleaning up</td>
<td>Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.</td>
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</tbody>
</table>

SECTION 7: Handling and storage

<table>
<thead>
<tr>
<th>Precaution</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling</td>
<td>Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose</td>
</tr>
</tbody>
</table>
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
Adequate ventilation to control air-borne 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: Protective suit. Safety shoes.

Hygiene measures: When using do not eat or drink. When using do not smoke.
### SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

**Appearance**
- Form: Liquid
- Physical state: Liquid
- Color: Clear, colorless

**Safety data**
- Flash point: 186 °C (367 °F)
- Lower explosion limit: Not applicable
- Upper explosion limit: Not applicable
- Oxidizing properties: no
- Autoignition temperature: 341 °C (646 °F)
- Molecular formula: (C12H24)2
- Molecular weight: 336.72 g/mol
- pH: Not applicable
- Melting point/range: < -50 °C (< -58 °F)
- Boiling point/boiling range: > 250 °C (> 482 °F)
- Vapor pressure: < 0.02 PSI at 37.8 °C (100.0 °F)
- Relative density: 0.8074 at 15.6 °C (60.1 °F)
- Density: 807.7 g/l
- Water solubility: Soluble in hydrocarbon solvents; insoluble in water.
- Partition coefficient: n-octanol/water: No data available
- Viscosity, kinematic: 7.5 cSt at 40 °C (104 °F)
- Relative vapor density: 7 (Air = 1.0)
- Evaporation rate: No data available

**SECTION 10: Stability and reactivity**

Wash hands before breaks and at the end of workday.
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: Further information: No decomposition if stored and applied as directed.

Conditions to avoid: No data available.

Materials to avoid: No data available.

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

SECTION 11: Toxicological information

Acute oral toxicity
1-Dodecene, Dimer Unhydrogenated: LD50 Oral: > 5,000 mg/kg
Species: Rat
Information given is based on data obtained from similar substances.

Acute inhalation toxicity
1-Dodecene, Dimer Unhydrogenated: LC50: 1.71 mg/l
Exposure time: 4 h
Species: Rat
Sex: female
Test atmosphere: dust/mist
Harmful if inhaled.
Information given is based on data obtained from similar substances.

LC50: > 5.06 mg/l
Exposure time: 4 h
Species: Rat
Sex: males
Test atmosphere: dust/mist
Information given is based on data obtained from similar substances.

Acute dermal toxicity
1-Dodecene, Dimer Unhydrogenated: LD50 Dermal: > 2,000 mg/kg
Species: Rat

Skin irritation
| 1-Dodecene, Dimer Unhydrogenated | : No skin irritation. Information given is based on data obtained from similar substances. |
| Eye irritation | 1-Dodecene, Dimer Unhydrogenated : No eye irritation. Information given is based on data obtained from similar substances. |
| Sensitization | 1-Dodecene, Dimer Unhydrogenated : Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances. |
| Aspiration toxicity | 1-Dodecene, Dimer Unhydrogenated : May be fatal if swallowed and enters airways. |
| Synfluid® Dimer C12 Further information | : Solvents may degrease the skin. |

**SECTION 12: Ecological information**

**Ecotoxicity effects**

**Toxicity to fish** : Not classified due to data which are conclusive although insufficient for classification.

**Toxicity to daphnia and other aquatic invertebrates** : Not classified due to data which are conclusive although insufficient for classification.

**Toxicity to algae** : Not classified due to data which are conclusive although insufficient for classification.

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

**Elimination information (persistence and degradability)**

**Bioaccumulation** : This material is not expected to bioaccumulate.

**Mobility** : No data available

**Results of PBT assessment**

1-Dodecene, Dimer Unhydrogenated : 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** : This material is not expected to be harmful to aquatic organisms.
Synfluid® Dimer C12

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

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.

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))

SDS Number: 100000014082  8/12
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

National legislation

SARA 311/312 Hazards: Aspiration hazard
Acute toxicity (any route of exposure)

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW

CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity: This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

**US State Regulations**

Pennsylvania Right To Know : No components are subject to the Pennsylvania Right to Know Act.

California Prop. 65 Components : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

Europe REACH : This product is in full compliance according to REACH regulation 1907/2006/EC.

Switzerland CH INV : Not in compliance with the inventory

United States of America (USA) TSCA : On or in compliance with the active portion of the TSCA inventory

Canada NDSL : This product contains one or several components listed in the Canadian NDSL.

Australia AICS : Not 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 : A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.

Philippines PICCS : Not in compliance with the inventory

China IECSC : Not in compliance with the inventory

Taiwan TCSI : Not in compliance with the inventory
NFPA Classification: Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0

Further information
Legacy SDS Number: 5836

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>
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