SAFETY DATA SHEET

AlphaPlus® 1-Tetradecene

Version 1.12

Revision Date 2019-11-14

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

Product information
Product Name: AlphaPlus® 1-Tetradecene
Material: 1064098, 1037032, 1037031

Company: Chevron Phillips Chemical Company LP
Normal Alpha Olefins (NAO)
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: Aspiration hazard, Category 1

Labeling
Symbol(s):
SAFETY DATA SHEET

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Signal Word : Danger

Hazard Statements : H304: May be fatal if swallowed and enters airways.

Precautionary Statements :
Response: P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
ACGIH No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3: Composition/information on ingredients

Synonyms : Tetradec-1-ene (C14H28)
1-Tetradecene (C14H28)
NAO 14 (C14H28)

Molecular formula : C14H28

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<th>Weight %</th>
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<tr>
<td>1-Tetradecene</td>
<td>1120-36-1</td>
<td>94</td>
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<tr>
<td>2-Butyl-1-Decene</td>
<td>51655-65-3</td>
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<td>2-Ethyl-1-Dodecene</td>
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<tr>
<td>Related Materials</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. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

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

SECTION 5: Firefighting measures

Flash point: 107°C (225°F)
Autoignition temperature: 235°C (455°F)
Unsuitable extinguishing media: High volume water jet.
Specific hazards during firefighting: Standard procedure for chemical fires.
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: No data available.

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.

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 workplace 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

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 workplace. Wear as appropriate: Protective suit. Safety shoes.

Hygiene measures

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

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

SDS Number: 100000067489 4/13
**Appearance**

Form : Liquid
Physical state : Liquid
Color : Colorless

**Safety data**

Flash point : 107°C (225°F)
Lower explosion limit : > 0.5 % (V)
Upper explosion limit : < 5.4 % (V)
Oxidizing properties : no

Autoignition temperature : 235°C (455°F)
Molecular formula : C14H28
Molecular weight : 196.42 g/mol
pH : Not applicable
Pour point : No data available

Melting point/range : -13.9°C (7.0°F)
Boiling point/boiling range : 251°C (484°F)
Vapor pressure : 0.01 MMHG
at 25°C (77°F)
< 0.10 kPa
at 65°C (149°F)
Relative density : 0.77
at 15.6 °C (60.1 °F)
Density : 775 kg/m³
at 15°C (59°F)
774 kg/m³
at 25°C (77°F)
750 kg/m³
at 50°C (122°F)

Water solubility : Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water : No data available
Viscosity, kinematic : 2.61 cSt
at 20°C (68°F)
Relative vapor density : 6.8
(Air = 1.0)
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.

Conditions to avoid: No data available.

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

Hazardous decomposition products: No data available

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

SECTION 11: Toxicological information

AlphaPlus® 1-Tetradecene

Acute oral toxicity: LD50: > 5,000 mg/kg
Species: Rat
Sex: male and female
Information given is based on data obtained from similar substances.

Acute inhalation toxicity: LC50: > 5 mg/l
Exposure time: 4 h
Species: Rat
Test atmosphere: dust/mist
Method: Acute toxicity estimate
Information given is based on data obtained from similar substances.

Not classified due to data which are conclusive although insufficient for classification.
**Acute dermal toxicity**

LD50 Dermal: > 2,020 mg/kg  
Species: Rabbit  
Sex: male and female  
Information given is based on data obtained from similar substances.

**AlphaPlus® 1-Tetradecene Skin irritation**

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

**AlphaPlus® 1-Tetradecene Eye irritation**

No eye irritation  
Information given is based on data obtained from similar substances.

**AlphaPlus® 1-Tetradecene Sensitization**

Did not cause sensitization on laboratory animals. Information given is based on data obtained from similar substances.

**Genotoxicity in vitro**

1-Tetradecene  
Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Method: Mutagenicity (Escherichia coli - reverse mutation assay)  
Result: negative

Test Type: Mammalian cell gene mutation assay  
Metabolic activation: with and without metabolic activation  
Method: OECD Guideline 476  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Guideline 473  
Result: negative

**Genotoxicity in vivo**

1-Tetradecene  
Test Type: Micronucleus test  
Species: Mouse  
Method: Mutagenicity (micronucleus test)  
Result: negative

**Reproductive toxicity**

1-Tetradecene  
Species: Rat  
Sex: male  
Application Route: Oral diet  
Dose: 0, 100, 500, 1000 mg/kg  
Exposure time: 43-47 days  
Method: OECD Guideline 422  
NOAEL Parent: 1,000 mg/kg  
NOAEL F1: 1,000 mg/kg
AlphaPlus® 1-Tetradecene

Species: Rat
Sex: female
Application Route: Oral diet
Dose: 0, 100, 500, 1000 mg/kg
Exposure time: 46-47 days
Method: OECD Guideline 422
NOAEL Parent: 1,000 mg/kg
NOAEL F1: 1,000 mg/kg

AlphaPlus® 1-Tetradecene
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-Tetradecene: Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Reproductive toxicity: No toxicity to reproduction

AlphaPlus® 1-Tetradecene
Further information: Solvents may degrease the skin.

SECTION 12: Ecological information

Toxicity to fish
1-Tetradecene: LL50: > 1,000 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
semi-static test Test substance: yes
Method: OECD Test Guideline 203
The product has low solubility in the test medium. An aqueous dispersion was tested.

Toxicity to daphnia and other aquatic invertebrates
1-Tetradecene: EL50: > 1,000 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Test substance: yes
Method: OECD Test Guideline 202
The product has low solubility in the test medium. An aqueous dispersion was tested.

Toxicity to algae
1-Tetradecene: EL50: > 1,000 mg/l
Exposure time: 96 h
Species: Selenastrum capricornutum (algae)
static test Test substance: yes
Method: OECD Test Guideline 201
The product has low solubility in the test medium. An aqueous dispersion was tested.
dispersion was tested.

Biodegradability : According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Elimination information (persistence and degradability)

Mobility

1-Tetradecene : No data available

Results of PBT assessment

1-Tetradecene : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

1-Tetradecene : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard

1-Tetradecene : 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))
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 : Acute Health Hazard

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 : No chemicals in this material are subject to the reporting
Planning Quantity: 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

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

Pennsylvania Right To Know: 1-Tetradecene - 1120-36-1

New Jersey Right To Know: 1-Tetradecene - 1120-36-1
2-Butyl-1-Decene - 51655-65-3
2-Ethyl-1-Dodecene - 19780-34-8
2-Hexyl-1-Octene - 19780-80-4

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 : On the inventory, or in compliance with the inventory

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

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 : 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 : PE0020

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.

<p>| Key or legend to abbreviations and acronyms used in the safety data sheet |
|-----------------------------|-----------------|-------------------|
| ACGIH | American Conference of Government Industrial Hygienists | LD50 | Lethal Dose 50% |
| AICS | Australia, Inventory of Chemical Substances | LOAEL | Lowest Observed Adverse Effect Level |
| DSL | Canada, Domestic Substances | NFPA | National Fire Protection Agency |</p>
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<th>List</th>
<th>NDSL</th>
<th>CNS</th>
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<td>National Toxicology Program</td>
<td>New Zealand Inventory of Chemicals</td>
<td>No Observable Adverse Effect Level</td>
<td>No Observed Effect Concentration</td>
<td>Occupational Safety &amp; Health Administration</td>
<td>Permissible Exposure Limit</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
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<td>Resource Conservation Recovery Act</td>
<td>Short-term Exposure Limit</td>
<td>Threshold Limit Value</td>
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<td>Toxic Substance Control Act</td>
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<td>Workplace Hazardous Materials Information System</td>
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