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

**Product information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
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<tbody>
<tr>
<td>Product Name</td>
<td>AlphaPlus® 1-Octadecene</td>
</tr>
<tr>
<td>Material</td>
<td>1064095, 1037052, 1037053, 1036984, 1037051, 1037050</td>
</tr>
<tr>
<td>Company</td>
<td>Chevron Phillips Chemical Company LP</td>
</tr>
<tr>
<td></td>
<td>Normal Alpha Olefins (NAO)</td>
</tr>
<tr>
<td></td>
<td>10001 Six Pines Drive</td>
</tr>
<tr>
<td></td>
<td>The Woodlands, TX 77380</td>
</tr>
<tr>
<td>Local</td>
<td>CHEVRON PHILLIPS CHEMICALS ASIA PTE. LTD.</td>
</tr>
<tr>
<td></td>
<td>C/O DONG WOO CORPORATION</td>
</tr>
<tr>
<td></td>
<td>#B-2601,JEONGJAIL-RO,</td>
</tr>
<tr>
<td></td>
<td>BUNDANG-GU,SEONGNAMI-SI,</td>
</tr>
<tr>
<td></td>
<td>GYEONGGI-DO,13557</td>
</tr>
<tr>
<td></td>
<td>SOUTH KOREA</td>
</tr>
<tr>
<td></td>
<td>Telephone no.: +612-9186-1132</td>
</tr>
</tbody>
</table>

**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**

Standards for classification and labeling of chemical substances and material safety data sheet (ministry of employment and labor public notice No. 2016-19) (GHS 2011)

**Classification**

- Skin corrosion/irritation, Category 2
AlphaPlus® 1-Octadecene

SAFETY DATA SHEET

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Aspiration hazard, Category 1

Labeling

Symbol(s): [Chemical hazard symbols]
Signal Word: Danger
Hazard Statements: H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
Precautionary Statements:

Prevention:
P264: Wash the contact area thoroughly after handling.
P280: Wear protective gloves.
Response:
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P321: Specific treatment (see supplemental first aid instructions on this label).
P331: Do NOT induce vomiting.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P362 + P364: Take off contaminated clothing and wash it before reuse.

Storage:
P405: Store locked up.
Disposal:
P501: Dispose of contents and container according to wastes control act.

SECTION 3: Composition/information on ingredients

Synonyms:
C18
NAO 18
Octadecene-1
C18H36
Molecular formula: C18H36
Chemical name | CAS-No. | Concentration | KECl Number
---------------|---------|---------------|---------------
1-Octadecene | 112-88-9 | 90 % - 100% | KE-26436

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

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### SAFETY DATA SHEET

**AlphaPlus® 1-Octadecene**  
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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 rinsing. If eye irritation persists, consult a specialist.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>154°C (309°F)</td>
</tr>
<tr>
<td>Method</td>
<td>PMCC</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>250°C (482°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. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</td>
</tr>
<tr>
<td>Special protective equipment for fire-fighters</td>
<td>Wear self-contained breathing apparatus for firefighting if necessary.</td>
</tr>
<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>
</tr>
<tr>
<td>Fire and explosion protection</td>
<td>Normal measures for preventive fire protection.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Carbon Dioxide. Carbon monoxide.</td>
</tr>
</tbody>
</table>

### SECTION 6: Accidental release measures

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</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>
</tr>
</tbody>
</table>
### 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

**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. Wash hands before breaks and at the end of workday.
**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

**Appearance**
- Physical state: Liquid
- Color: Colorless liquid or white solid

**Safety data**
- **Flash point**: 154°C (309°F)
  - Method: PMCC
- **Lower explosion limit**: 0.4 % (V)
- **Upper explosion limit**: 6.9 % (V)
- **Oxidizing properties**: No
- **Autoignition temperature**: 250°C (482°F)
- **Molecular formula**: C18H36
- **Molecular weight**: 252.54 g/mol
- **pH**: Not applicable
- **Pour point**: No data available
- **Freezing point**: 17.5°C (63.5°F)
- **Boiling point/boiling range**: 315°C (599°F)
- **Vapor pressure**:
  - 0.00 Pa at 25°C (77°F)
  - < 0.01 kPa at 65°C (149°F)
- **Relative density**:
  - 0.79 at 15.6 °C (60.1 °F)
- **Density**:
  - 792 kg/m³ at 15°C (59°F)
  - 789 kg/m³ at 20°C (68°F)
  - 768 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**:
  - 3.8 cSt at 37.8°C (100.0°F)
AlphaPlus® 1-Octadecene

Relative vapor density : 8.71 (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 : Carbon Dioxide
Carbon monoxide
Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Acute oral toxicity
1-Octadecene : LD50: > 10,000 mg/kg
Species: Rat
Sex: male and female
Method: OECD Test Guideline 401
Test substance: no
Information given is based on data obtained from similar substances.

Acute inhalation toxicity
1-Octadecene : Not classified due to data which are conclusive although insufficient for classification.
Information given is based on data obtained from similar substances.
Skin irritation
1-Octadecene : No skin irritation
Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

Eye irritation
1-Octadecene : No eye irritation

Sensitization
1-Octadecene : Did not cause sensitization on laboratory animals.

Repeated dose toxicity
1-Octadecene : Species: rat (female)
Application Route: oral gavage
Dose: 0, 100, 500, 1000 mg/kg/d
NOEL: 1,000 mg/kg
Method: OECD Guideline 422
Information given is based on data obtained from similar substances.

Genotoxicity in vitro
1-Octadecene : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: rodent hepatocytes
Method: OECD Test Guideline 473
Result: negative

Reproductive toxicity
1-Octadecene : Species: Rat
Sex: male and female
Application Route: oral gavage
Dose: 0, 100, 500, 1000 mg/kg/d
Method: OECD Guideline 421
NOAEL Parent: 1,000 mg/kg
NOAEL F1: 1,000 mg/kg
Information given is based on data obtained from similar substances.

AlphaPlus® 1-Octadecene
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-Octadecene : Carcinogenicity: Not available
AlphaPlus® 1-Octadecene

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Teratogenicity: Not available
Reproductive toxicity: No toxicity to reproduction

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

SECTION 12: Ecological information

Ecotoxicity effects
Toxicity to fish
1-Octadecene: LL50: > 1,000 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 203
Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates
1-Octadecene: EL50: > 1,000 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202
Information given is based on data obtained from similar substances.

Toxicity to algae
1-Octadecene: EC50: > 1,000 mg/l
Exposure time: 72 h
Species: Raphidocellus subcapitata (algae)
Method: OECD Test Guideline 201
Information given is based on data obtained from similar substances.

Toxicity to bacteria
1-Octadecene: NOEC: 3 mg/l
Exposure time: 120 h
Respiration inhibition

Biodegradability
1-Octadecene: This material is expected to be readily biodegradable.
Information given is based on data obtained from similar substances.

Elimination information (persistence and degradability)
AlphaPlus® 1-Octadecene

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Mobility : No data available

Results of PBT assessment
1-Octadecene : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information

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

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.
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

Regulation under the Occupational Safety and Health Act
A Material Safety Datasheet (MSDS) for this product is not required according to article 41 of the ISHA.

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Chemical name</th>
<th>Threshold limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful Substances Prohibited from Manufacturing</td>
<td>Not relevant</td>
<td></td>
</tr>
<tr>
<td>Harmful Substances Required Permission for Manufacture</td>
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</tr>
</tbody>
</table>

Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Chemical name</th>
<th>Threshold limits</th>
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<tr>
<td>Toxic Chemicals</td>
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<tr>
<td>Prohibited Chemicals</td>
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<tr>
<td>Observational chemicals</td>
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<tr>
<td>Restricted Chemicals</td>
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<tr>
<td>Toxic Release Inventory</td>
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</tr>
</tbody>
</table>

Dangerous Substances Safety Management Act

Dangerous Substances Safety Management Act: Flammable liquids, Type 3 petroleums, Water insoluble liquid

Notification status

Europe  REACH: On the inventory, or in compliance with the inventory
Switzerland  CH INV: On the inventory, or in compliance with the inventory

SDS Number:100000067758
### SECTION 16: Other information

**Further information**

Legacy SDS Number : PE0023

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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</thead>
<tbody>
<tr>
<td>ACGIH</td>
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<td>AICS</td>
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