SAFETY DATA SHEET

AlphaPlus® C20-24


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

1.1

Product information

Product Name : AlphaPlus® C20-24
Material : 1037057, 1083291, 1059406, 1059404, 1036985, 1037058

EC-No.Registration number

<table>
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<tr>
<th>Chemical name</th>
<th>CAS-No. EC-No. Index No.</th>
<th>Legal Entity Registration number</th>
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<tbody>
<tr>
<td>Alkenes, C20-24 α-</td>
<td>93924-10-8 300-202-1</td>
<td>Chevron Phillips Chemical Company LP 01-2119485290-39-0000</td>
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</table>

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified Uses : Manufacture
Use as an intermediate
Formulation
Use in Oil and Gas field drilling and production operations - Industrial
Use in Oil and Gas field drilling and production operations – Professional
Lubricants - Industrial
Lubricants - Professional
Lubricants - Consumer
Metal working fluids / rolling oils - Industrial
Metal working fluids / rolling oils – Professional
Use as a fuel - industrial
Use as a fuel – professional
Use as a fuel – consumer
Functional Fluids - Industrial
Functional Fluids - Professional
Functional Fluids - Consumer
Use in polymer production – industrial
Other consumer uses

1.3 Details of the supplier of the safety data sheet

Company : Chevron Phillips Chemical Company LP
Normal Alpha Olefins (NAO)
10001 Six Pines Drive

SDS Number: 1000000068831 1/15
1.4 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)-11-59839431

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
**REGULATION (EC) No 1272/2008**

Aspiration hazard, Category 1

**H304:**
May be fatal if swallowed and enters airways.

2.2 Labeling (REGULATION (EC) No 1272/2008)

**Hazard pictograms:**

- ☠️

**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 or doctor/physician.
  - P331
    Do NOT induce vomiting.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Not a hazardous substance or mixture.

Additional Labeling:
EUH210 Safety data sheet available on request.

SECTION 3: Composition/information on ingredients

3.1 - 3.2 Substance or Mixture
Synonyms: NAO 20-24
          C20-24 Alpha Olefin Fraction

Molecular formula: UVCB

Hazardous ingredients

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<th>Chemical name</th>
<th>CAS-No. EC-No. Index No.</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [wt%]</th>
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<td>93924-10-8 300-202-1</td>
<td>Asp. Tox. 1; H304</td>
<td>100</td>
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</tbody>
</table>

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

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice: No hazards which require special first aid measures.

If inhaled: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

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 give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not ingest. If swallowed then seek immediate medical assistance.
SECTION 5: Firefighting measures

Flash point : 183°C (361°F)  
Method: PMCC

Autoignition temperature : 239°C (462°F)

5.1 Extinguishing media

Unsuitable extinguishing media : High volume water jet.

5.2 Special hazards arising from the substance or mixture

Specifying hazards during firefighting : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.3 Advice for firefighters

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 : Provide appropriate exhaust ventilation at places where dust is formed.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Avoid dust formation. Avoid breathing dust.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Reference to other sections : For personal protection see section 8. For disposal considerations see section 13.

A quantitative risk assessment is not required for the environment.  
A quantitative risk assessment is not required for human health.
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling

Advice on safe handling : Avoid contact with skin and eyes. 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 : Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

PNEC : Fresh water
        Value: 0,001 mg/l

PNEC : Marine water
        Value: 0,001 mg/l

8.2 Exposure controls

Engineering measures

Adequate ventilation to control airborne 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. Safety glasses.

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.

A quantitative risk assessment is not required for the environment.
A quantitative risk assessment is not required for human health.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Form : Wax, Solid
Physical state : Solid
Color : White

Safety data
Flash point : 183°C (361°F)
Method: PMCC
Lower explosion limit : No data available
Upper explosion limit : No data available
Oxidizing properties : no
Autoignition temperature : 239°C (462°F)
Molecular formula : UVCB
Molecular weight : Varies
pH : Not applicable
Melting point/range : 35°C (95°F)
### SECTION 10: Stability and reactivity

**10.1 Reactivity**
- Stable at normal ambient temperature and pressure.

**10.2 Chemical stability**
- This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**10.3 Possibility of hazardous reactions**

**Hazardous reactions**
- Further information: No decomposition if stored and applied as directed.

**10.4 Conditions to avoid**
- No data available.

**10.5 Materials to avoid**
- No data available.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

**AlphaPlus® C20-24**

**Acute oral toxicity**
- LD50 Oral: > 5,000 mg/kg
- Species: Rat
- Sex: male and female
- Method: OECD Test Guideline 423
- Test substance: yes

**AlphaPlus® C20-24**

**Acute inhalation toxicity**
- LC50: 110.1 mg/L
- Exposure time: 4 h
- Species: Rat
- Sex: male
- Test atmosphere: vapor
- Method: OECD Test Guideline 403
- Information given is based on data obtained from similar substances.

**AlphaPlus® C20-24**

**Acute dermal toxicity**
- LD50 Dermal: > 2,000 mg/kg
- Species: Rat
- Sex: male and female
- Method: OECD Test Guideline 402
- Information given is based on data obtained from similar substances.

**AlphaPlus® C20-24**

**Skin irritation**
- No skin irritation.

**AlphaPlus® C20-24**

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

**AlphaPlus® C20-24**

**Sensitization**
- Did not cause sensitization on laboratory animals.

**Repeated dose toxicity**
- Species: Rat, Male and female
- Application Route: oral gavage
- Dose: 100, 500, 1000 mg/kg/d
- Exposure time: 42-51 days
- Number of exposures: Daily
- NOEL: 1000 mg/kg bw/day
- Method: OECD Guideline 422
### Genotoxicity in vitro

**Alkenes, C20-24 α-**

- **Test Type**: Ames test
- Metabolic activation: with and without metabolic activation
- Result: negative

- **Test Type**: Ames test
- Metabolic activation: with and without metabolic activation
- 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
- Result: negative

### Genotoxicity in vivo

**Alkenes, C20-24 α-**

- **Test Type**: Mouse micronucleus assay
- Species: Mouse
- Exposure time: 500, 1,000, 2,000 mg/kg
- Method: Mutagenicity (micronucleus test)
- Result: negative

- **Test Type**: Mouse micronucleus assay
- Species: Mouse
- Exposure time: 1,000, 10,000, 25,000 ppm
- Method: Mutagenicity (micronucleus test)
- Result: negative

### Reproductive toxicity

**Alkenes, C20-24 α-**

- **Species**: Rat
- **Sex**: male and female
- **Application Route**: oral gavage
- **Dose**: 100, 500, 1000 mg/kg/day
- **Number of exposures**: Daily
- **Test period**: 41-55 days
**AlphaPlus® C20-24**

Method: OECD Guideline 422  
NOAEL Parent: 1000 mg/kg bw/day  
NOAEL F1: 1000 mg/kg bw/day

Species: Rat  
Sex: male and female  
Application Route: oral gavage  
Dose: 100, 500, 1000 mg/kg/d  
Number of exposures: Daily  
Test period: 42-51 days  
Method: OECD Guideline 421  
NOAEL Parent: 1000 mg/kg bw/day  
NOAEL F1: 1000 mg/kg bw/day

**AlphaPlus® C20-24**  
**Aspiration toxicity**: May be fatal if swallowed and enters airways.

**CMR effects**  
Alkenes, C20-24 α-  
Carcinogenicity: Not available  
Mutagenicity: Did not show mutagenic effects in animal experiments.  
Teratogenicity: Did not show teratogenic effects in animal experiments.  
Reproductive toxicity: No toxicity to reproduction

**AlphaPlus® C20-24**  
**Further information**: No data available.

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Ecotoxicity effects**

**Toxicity to fish**  
LL50: > 1,000 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
semi-static test 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**  
EL50: 1,000 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
static test Method: OECD Test Guideline 202

**Toxicity to algae**  
EL50: > 1,000 mg/l  
Exposure time: 72 h  
Species: Selenastrum capricornutum (algae)  
static test Method: OECD Test Guideline 201  
The product has low solubility in the test medium. An aqueous dispersion was tested.
12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

Elimination information (persistence and degradability)

Bioaccumulation: This material is not expected to bioaccumulate.

12.4 Mobility in soil

Mobility: No data available

12.5 Results of PBT and vPvB assessment

Results of PBT assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Additional ecological information: No data available

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

13.1 Waste treatment methods

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.

A quantitative risk assessment is not required for the environment. A quantitative risk assessment is not required for human health.

SECTION 14: Transport information

14.1 - 14.7 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
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture National legislation


Water contaminating class : WGK 1 slightly water endangering (Germany)

15.2 Chemical Safety Assessment

Components : Alkenes, C20-24 α- A Chemical Safety Assessment 300-202-1 has been carried out for this substance.

Major Accident Hazard Legislation : ZEU_SEVES3 Update: Not applicable

Notification status
Europe REACH : This product is in full compliance according to REACH regulation 1907/2006/EC.
United States of America (USA) TSCA : On or in compliance with the active portion of the TSCA 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 : This substance may be used as a component in a product covered by a group standard but it is not approved for use as a chemical in its own right
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 : PE0025

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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Full text of H-Statements referred to under sections 2 and 3.
H304 May be fatal if swallowed and enters airways.