AlphaPlus® C14-16-18

Version 1.4 Revision Date 2015-02-04

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

Product information

Product Name : AlphaPlus® C14-16-18
Material : 1071132, 1037029, 1037013, 1037028, 1037014, 1037012

Use : Solvent

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:
North America: CHEMTREC 800.424.9300 or 703.527.3887
Asia: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

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.

Emergency Overview

Danger
Form: Liquid **Physical state**: Liquid **Color**: Colorless **Odor**: Odorless
OSHA Hazards : Aspiration hazard

Classification

: Aspiration hazard , Category 1

Labeling

Symbol(s) :

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.

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 : C14/C16/C18 Normal Alpha Olefin (NAO) Blend

Molecular formula : Mixture

Component	CAS-No.	Weight %
1-Tetradecene	1120-36-1	15 - 60
1-Hexadecene	629-73-2	20 - 50
1-Octadecene	112-88-9	10 - 40

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 rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	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

Flash point	:	124 °C (255 °F) Method: Cleveland Open Cup
Autoignition temperature	:	228 °C (442 °F)
Unsuitable extinguishing media	:	High volume water jet.
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	:	Carbon Dioxide. Carbon oxides.

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	:	Normal measures for preventive fire protection.

against fire and explosion

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	:	Suitable respiratory equipment:.
Hand protection	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water. Tightly fitting safety goggles.
Skin and body protection	:	Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
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

Form	:	Liquid
Physical state	:	Liquid
Color	:	Colorless
Odor	:	Odorless

Safety data

Flash point	:	124 °C (255 °F) Method: Cleveland Open Cup
Lower explosion limit	:	0.5 %(V)
Upper explosion limit	:	5.9 %(V)
Oxidizing properties	:	no
Autoignition temperature	:	228 °C (442 °F)
Molecular formula	:	Mixture
Molecular weight	:	Not applicable
pH	:	Not applicable

Freezing point	:	15 °C (59 °F)
Boiling point/boiling range	:	> 250 °C (> 482 °F)
Vapor pressure	:	< 0.01 MMHG at 20 °C (68 °F)
Relative density	:	0.77, 25 °C(77 °F)
Water solubility	:	Soluble in hydrocarbon solvents; insoluble in water.
Viscosity, kinematic	:	2 - 3 cSt at 40 °C (104 °F)
Relative vapor density	:	7.7 (Air = 1.0)

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.

Possibility of hazardous reactions

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

SECTION 11: Toxicological information

Acute oral toxicity

1-Hexadecene	:	LD50: 10 g/kg Species: rat Sex: male and female Method: OECD Test Guideline 401 Test substance: yes
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-Tetradecene	:	LC50: 32000 ppm 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.
1-Hexadecene		LC50: > 8.5 mg/lExposure time: 1 h Species: rat Sex: male Test atmosphere: dust/mist

Acute dermal toxicity

1-Hexadecene	:	LD50: > 2020 mg/kg Species: rabbit Sex: male and female Information given is based on data obtained from similar substances.

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Skin irritation : According to the classification criteria of the European Union, the product is not considered as being a skin irritant.
Information refers to the main ingredient.

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Eye irritation : No eye irritation

Sensitization

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

Repeated dose toxicity

1-Hexadecene	:	Species: rat, Male and female Sex: Male and female Application Route: oral gavage Dose: 100, 500, or 1000 mg/kg/day Exposure time: 42- 51 days Number of exposures: Daily NOEL: 1000 mg/kg bw/day Method: OECD Guideline 422 Information given is based on data obtained from similar substances.

Species: rat, male
Sex: male
Application Route: oral gavage
Dose: 10, 101, 1010, 3365 mg/kg/day
Exposure time: 4 weeks
Number of exposures: 7 days/week
NOEL: 101 mg/kg bw/day
Method: OECD Test Guideline 407
Target Organs: Stomach
Information given is based on data obtained from similar substances.

Species: rat, female
Sex: female
Application Route: oral gavage
Dose: 10, 101, 1010, 3365 mg/kg/day
Exposure time: 4 weeks
Number of exposures: 7 days/week
NOEL: 1010 mg/kg bw/day
Method: OECD Test Guideline 407
Information given is based on data obtained from similar substances.

Species: rat, Male and female
Sex: Male and female
Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg/day
Exposure time: 13 weeks
Number of exposures: 7 days/week
NOEL: 1000 mg/kg bw/day
Information given is based on data obtained from similar substances.

Species: rat, Male and female
Sex: Male and female
Application Route: Inhalation
Dose: 300, 1000, 3000 ppm
Exposure time: 13 weeks
Number of exposures: 6 hrs/day, 5 days/week
NOEL: 3000 ppm
Information given is based on data obtained from similar substances.

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.

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

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

1-Hexadecene

Species: rat
Sex: female
Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg/day
Number of exposures: Daily
Test period: 41 to 55 days
Method: OECD Guideline 421
NOAEL Parent: 1000 mg/kg bw/day
NOAEL F1: 1000 mg/kg bw/day
Information given is based on data obtained from similar substances.

Species: rat
Sex: male and female
Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg/day
Number of exposures: Daily
Test period: 42- 51days
Method: OECD Guideline 422
NOAEL Parent: 1000 mg/kg bwday
NOAEL F1: 1000 mg/kg bw/day
Information given is based on data obtained from similar substances.

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.

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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

1-Hexadecene

Carcinogenicity: Not classifiable as a human carcinogen.

	Mutagenicity: Did not show mutagenic effects in animal experiments. Teratogenicity: Did not show teratogenic effects in animal experiments. Reproductive toxicity: No toxicity to reproduction
1-Octadecene	Carcinogenicity: Not available Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Teratogenicity: Not available Reproductive toxicity: No toxicity to reproduction

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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.
1-Hexadecene	LL50: > 1000 mg/L Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 203 The product has low solubility in the test medium. An aqueous dispersion was tested.
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-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.
1-Hexadecene	EL50: < 1000 mg/L Exposure time: 48 h Species: Daphnia magna (Water flea) static test Method: OECD Test Guideline 202 The product has low solubility in the test medium. An aqueous dispersion was tested.

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-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.
1-Hexadecene	EC50: > 1000 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.
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

Elimination information (persistence and degradability)

Bioaccumulation

1-Hexadecene	: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.
1-Octadecene	: Bioconcentration factor (BCF): 5,128 Method: Estimated based on individual component values.

Biodegradability : Expected to be ultimately biodegradable

Ecotoxicology Assessment

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

1-Hexadecene	:	Non-classified PBT substance, Non-classified vPvB substance
1-Octadecene	:	Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	:	No data available

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

Other information	**:**	**OLEFINS (C13 +, all isomers), S.T. 2, Cat.Y**

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Acute Health Hazard

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	:	SARA 302: 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 Ingredients	:	SARA 313: 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).

US State Regulations

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

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

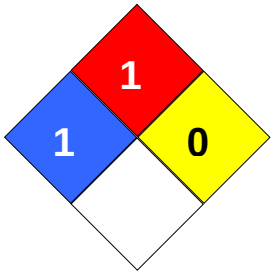
California Prop. 65 Ingredients : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH	:	On the inventory, or in compliance with the inventory
United States of America TSCA	:	On the inventory, or in compliance with the 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	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0



Further information

Legacy SDS Number : 6855

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.

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 List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		