

AlphaPlus® 1-Hexadecene

Version 1.15

Revision Date 2026-08-03

Version	Revision Date:	SDS Number (Internal):	MSDS number: AA00974-0000000399
1.15	2026-08-03	100000065709	Date of last issue: 2025-04-09 Date of first issue: 2009-10-27

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AlphaPlus® 1-Hexadecene

Material : 1130963, 1128490, 1076762, 1037049, 1037048

Product code : 000000000000000000 000000000000000000

Recommended use of the chemical and restrictions on useRecommended use : Intermediate
Drilling Fluid
Commercial ProductRestrictions on use : This material should not be used for purposes other than the identified uses in section 1 without expert advice.
None known.**Manufacturer or supplier's details**Address : Chevron Phillips Chemical Company LP
Normal Alpha Olefins (NAO)
9500 Lakeside Blvd.
The Woodlands, TX 77381Address : CHEVRON PHILLIPS CHEMICALS ASIA PTE. LTD.
C/O DONG WOO CORPORATION
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BUNDANG-GU, SEONGNAMI-SI,
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SOUTH KOREA
Telephone no.: +612-9186-1132**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

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

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)

Belgium: 070 245 245 (24 hours/day, 7 days/week)

Bulgaria: +359 2 9154 233

Croatia: +3851 2348 342 (24 hours/day, 7 days/week)

Cyprus: 1401

Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402

Denmark: Danish Poison Center (Giftlinjen): +45 8212 1212

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Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Finland: 0800 147 111 09 471 977 (24 hours/day)
 France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)
 Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Greece: (0030) 2107793777 (24 hours/day, 7 days/week)
 Hungary: +36-80-201-199 (24 hours/day, 7 days/week)
 Iceland: 543 2222 (24 hours/day, 7 days/week)
 Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Italy: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico “Agostino Gemelli”, Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726; POISON CENTER ROME – Policlinico “Umberto I” Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326; POISON CENTER NAPLES – Azienda Ospedaliera “Antonio Cardarelli” Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera “Papa Giovanni XXIII” Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858;
 Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)
 Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Lithuania: +370 (85) 2362052
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 Malta: +356 2395 2000
 The Netherlands: NVIC: +31 (0)88 755 8000
 Norway: 22 59 13 00 (24 hours/day, 7 days/week)
 Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Portugal: CIAV phone number: +351 800 250 250
 Romania: +40213183606
 Slovakia: +421 2 5477 4166
 Slovenia: Phone number: 112
 Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)
 Sweden: 112 – ask for Poisons Information

Organization that prepared the SDS : Product Safety and Toxicology Group
 E-mail address : SDS@CPChem.com
 Website : www.CPChem.com
 Appointees : 회사명: 리이치 24 시코리아㈜.
 주소: 서울시 서초구 헌릉로 7,
 외국기업창업지원연구센터
 (IKP) 908-909호

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전화: +82-1067838981

2. HAZARDS IDENTIFICATION**GHS Classification**

Aspiration hazard : Category 1

GHS label elements

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 and container according to wastes control act.

Other hazards which do not result in classification

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Components**

Chemical name	Common Name	CAS-No.	Concentration (% w/w)
1-Octadecene	octadec-1-ene	112-88-9	$\geq 1 - < 5$
1-Tetradecene	tetradec-1-ene	1120-36-1	$\geq 1 - < 2.5$

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1-Hexadecene	hexadec-1-ene	629-73-2	>= 90 - < 95
None			

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.
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.
In case of skin contact	: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
If inhaled	: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
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.
Most important symptoms and effects, both acute and delayed	: No data available No data available
Notes to physician	: Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable and unsuitable extinguishing media**

Unsuitable extinguishing media	: High volume water jet
Specific hazards during fire fighting	: Standard procedure for chemical fires.
Specific extinguishing methods	: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment	: Wear self-contained breathing apparatus for firefighting if nec-

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for fire-fighters

essary.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : 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 and materials for containment and 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.

7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors or spray mist.
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.
- Conditions for safe storage : 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.
- Further information on storage stability : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

- 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 con-

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trols 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. Among the following personal protective equipment, the PPEs which require safety certification need to be certified by KOSHA.

- | | |
|--------------------------|--|
| Respiratory protection | : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate.
If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:
Air-Purifying Respirator for Dusts and Mists / P100
A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. |
| Eye protection | : Eye wash bottle with pure water
Tightly fitting safety goggles |
| Hand protection | |
| Remarks | : 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. |
| 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. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	:	liquid
Color	:	Clear, colorless
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/ range	:	4 °C
Freezing point	:	4 °C
Pour point	:	No data available
Boiling point/boiling range	:	285 °C
Flash point	:	132 °C
	:	Method: PMCC
Evaporation rate	:	No data available
Self-ignition	:	240 °C
Upper explosion limit / Upper flammability limit	:	Upper flammability limit 5.8 %(V)
Lower explosion limit / Lower flammability limit	:	Lower flammability limit 0.5 %(V)
Vapor pressure	:	0.003 MMHG (25 °C) < 0.01 kPa (65 °C)
Solubility(ies) Water solubility	:	Soluble in hydrocarbons; insoluble in water
Relative vapor density	:	7.72 (Air = 1.0)
Relative density	:	0.78 (15.6 °C) 0.788 (10 °C) 0.781 (20 °C) 0.76 (50 °C)

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	0.757 (55 °C)
Density	: 785 kg/m ³ (15 °C)
	780 kg/m ³ (20 °C)
	760 kg/m ³ (50 °C)
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, kinematic	: 3.83 cSt (20 °C)
Oxidizing properties	: no
Molecular weight	: 224.48 g/mol

10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions	: 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: No decomposition if stored and applied as directed.
Conditions to avoid	: No data available
Incompatible materials	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous decomposition products	: No data available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: No data available
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Health hazard information**Acute toxicity****Components:****1-Octadecene:**

Acute oral toxicity	: LD50 (Rat, male and female): > 10,000 mg/kg
	Method: OECD Test Guideline 401

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Test substance: no
GLP: yes
Assessment: Not harmful
Remarks: Information given is based on data obtained from similar substances.

Acute inhalation toxicity : Remarks: Not classified due to data which are conclusive although insufficient for classification.
Information given is based on data obtained from similar substances.

Acute dermal toxicity : Remarks: Not classified due to data which are conclusive although insufficient for classification.
Information given is based on data obtained from similar substances.

1-Tetradecene:

Acute inhalation toxicity : Assessment: Not classified
Remarks: Not classified due to data which are conclusive although insufficient for classification.
Information given is based on data obtained from similar substances.

1-Hexadecene:

Acute oral toxicity : LD50 (Rat, male and female): 10 g/kg
Method: OECD Test Guideline 401
Test substance: yes
Assessment: Not harmful

Acute inhalation toxicity : LC50 (Rat, male): > 8.5 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Assessment: 0 - Not toxic

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2020 mg/kg
Assessment: Not harmful
Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation**Product:**

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : Mild skin irritation
Remarks : Repeated or prolonged contact with the mixture may cause

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removal of natural fat from the skin resulting in desiccation of the skin.

Components:**1-Octadecene:**

Species	: Rabbit
Exposure time	: 4 h
Result	: No skin irritation
Remarks	: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

1-Tetradecene:

Species	: Rabbit
Assessment	: No skin irritation
Method	: OECD Test Guideline 404
Result	: No skin irritation
GLP	: yes
Remarks	: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

1-Hexadecene:

Species	: Rabbit
Assessment	: No skin irritation
Method	: OECD Test Guideline 404
Result	: Not classified due to data which are conclusive although insufficient for classification.
Remarks	: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

Serious eye damage/eye irritation**Product:**

Remarks	: No data available
Remarks	: Vapors may cause irritation to the eyes, respiratory system and the skin.

Components:**1-Octadecene:**

Species	: Rabbit
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Result : No eye irritation
Exposure time : 72 h
Method : Draize Test

1-Tetradecene:

Species : Rabbit
Result : No eye irritation
Exposure time : 72 h
Assessment : No eye irritation
Method : Draize Test
GLP : yes
Remarks : Information given is based on data obtained from similar substances.

1-Hexadecene:

Species : Rabbit
Result : No eye irritation
Exposure time : 72 h
Method : Draize Test

Respiratory or skin sensitization**Skin sensitization**

Did not cause sensitization on laboratory animals.

Product:

Result : No data available

Components:**1-Octadecene:**

Test Type : Buehler Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitization on laboratory animals.
GLP : yes

1-Tetradecene:

Test Type : No data available
Species : Guinea pig
Result : Did not cause sensitization on laboratory animals.

1-Hexadecene:

Test Type : Buehler Test
Species : Guinea pig

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Method : OECD Test Guideline 406
Result : Did not cause sensitization on laboratory animals.
Test substance : yes

Carcinogenicity**Components:****1-Octadecene:**

Carcinogenicity - Assessment : Not available

1-Hexadecene:

Not applicable

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Germ cell mutagenicity**Components:****1-Octadecene:**

Genotoxicity in vitro : 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

Germ cell mutagenicity- Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

1-Tetradecene:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Escherichia coli - reverse mutation assay)
Result: negative
GLP: yes
Test substance: no

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

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Result: negative
GLP: yes
Test substance: no

Test Type: Chromosome aberration test in vitro
Method: OECD Guideline 473
Result: negative
GLP: yes
Test substance: no

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: Mutagenicity (micronucleus test)
Result: negative
GLP: yes
Test substance: no

Germ cell mutagenicity- Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

1-Hexadecene:

No data available

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
Test substance: no

Test Type: Mammalian cell gene mutation assay
Metabolic activation: with and without metabolic activation
Result: negative
Test substance: no

Test Type: Chromosome aberration test in vitro
Result: negative
Test substance: no

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Dose: 1,000, 10,000, 25,000 ppm
Result: negative
Test substance: no

Germ cell mutagenicity- Assessment : Did not show mutagenic effects in animal experiments.

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Reproductive toxicity**Components:****1-Octadecene:**

Reproductive toxicity - Assessment : No toxicity to reproduction
Not available

1-Tetradecene:

Reproductive toxicity - Assessment : No toxicity to reproduction

1-Hexadecene:

No data available

Reproductive toxicity - Assessment : No toxicity to reproduction
Did not show teratogenic effects in animal experiments.

STOT-single exposure**Product:**

Remarks : Not classified due to data which are conclusive although insufficient for classification.

STOT-repeated exposure**Product:**

Remarks : Not classified due to data which are conclusive although insufficient for classification.

Repeated dose toxicity**Components:****1-Octadecene:**

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

1-Hexadecene:

Species : Rat, Male and female
NOAEL : 1000 mg/kg bw/day

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Application Route : oral gavage
Exposure time : 42- 51 days
Number of exposures : Daily
Dose : 100, 500, or 1000 mg/kg/day
Method : OECD Guideline 422
Remarks : Information given is based on data obtained from similar substances.

Species : Rat, male
NOAEL : 101 mg/kg bw/day
Application Route : oral gavage
Exposure time : 4 weeks
Number of exposures : 7 days/week
Dose : 10, 101, 1010, 3365 mg/kg/day
Method : OECD Test Guideline 407
Target Organs : Stomach
Symptoms : gastrointestinal irritation, Body weight depression
Remarks : Information given is based on data obtained from similar substances.

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

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

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

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Aspiration toxicity**Product:**

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

Components:**1-Octadecene:**

May be fatal if swallowed and enters airways.

1-Tetradecene:

May be fatal if swallowed and enters airways.

1-Hexadecene:

May be fatal if swallowed and enters airways.

Experience with human exposure

No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information**Product:**

Remarks : Solvents may degrease the skin.

Components:**1-Octadecene:**

Remarks : Solvents may degrease the skin.

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12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:****Ecotoxicology Assessment**

Acute aquatic toxicity : No toxicity at the limit of solubility.

Components:**1-Octadecene:**Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Information given is based on data obtained from similar substances.Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
Remarks: Information given is based on data obtained from similar substances.Toxicity to algae/aquatic plants : EC50 (Raphidocellus subcapitata (algae)): > 1,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
Remarks: Information given is based on data obtained from similar substances.Toxicity to microorganisms : NOEC: 3 mg/l
Exposure time: 120 h
Test Type: Respiration inhibition**Ecotoxicology Assessment**

Acute aquatic toxicity : This material is not expected to be harmful to aquatic organisms.

Chronic aquatic toxicity : This material is not expected to be harmful to aquatic organisms.

1-Tetradecene:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l

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Exposure time: 96 h
Test Type: semi-static test
Test substance: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: The product has low solubility in the test medium.
An aqueous dispersion was tested.

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

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

Ecotoxicology Assessment

Acute aquatic toxicity : This material is not expected to be harmful to aquatic organisms.

Chronic aquatic toxicity : This material is not expected to be harmful to aquatic organisms.

1-Hexadecene:

Toxicity to fish : LL50 (*Oncorhynchus mykiss* (rainbow trout)): > 1000 mg/L
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: The product has low solubility in the test medium.
An aqueous dispersion was tested.

Toxicity to daphnia and other aquatic invertebrates : EL50 (*Daphnia magna* (Water flea)): < 1000 mg/L
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
Remarks: The product has low solubility in the test medium.
An aqueous dispersion was tested.

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Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (algae)): > 1000 mg/L
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: The product has low solubility in the test medium.
An aqueous dispersion was tested.

Ecotoxicology Assessment

Acute aquatic toxicity : This material is not expected to be harmful to aquatic organisms.

Chronic aquatic toxicity : This material is not expected to be harmful to aquatic organisms.

Persistence and degradability**Components:****1-Octadecene:**

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

1-Tetradecene:

Biodegradability : Remarks: Readily biodegradable, according to appropriate OECD test.

1-Hexadecene:

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

Bioaccumulative potential**Components:****1-Hexadecene:**

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.

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Mobility in soil**Components:****1-Octadecene:**

Mobility : Remarks: No data available

1-Tetradecene:

Mobility : Remarks: No data available

1-Hexadecene:

Mobility : Remarks: No data available

Other adverse effects**Product:**

Additional ecological information : This material is not expected to be harmful to aquatic organisms.

No data available

Components:**1-Octadecene:**Results of PBT and vPvB assessment : Non-classified PBT substance
Non-classified vPvB substance

Additional ecological information : This material is not expected to be harmful to aquatic organisms.

1-Tetradecene:Results of PBT and vPvB assessment : Non-classified PBT substance
Non-classified vPvB substance**1-Hexadecene:**Results of PBT and vPvB assessment : Non-classified PBT substance
Non-classified vPvB substance**Endocrine disrupting properties**

No data available

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13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : 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.

Disposal precautions

Dispose of contents and container according to wastes control act.

14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

Not regulated as a dangerous good

UN/ID No.	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
Packing instruction (cargo aircraft)	: Not applicable
Packing instruction (passenger aircraft)	: Not applicable

IMDG-Code

Not regulated as a dangerous good

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
EmS Code	: Not applicable
Marine pollutant	: no

Maritime transport in bulk according to IMO instruments

Not applicable

Domestic regulation

Refer to section 15 for specific national regulation.

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Special precautions for user

Remarks : OLEFINS (C13 +, all isomers), S.T. 2, Cat.Y
not regulated

15. REGULATORY INFORMATION**National regulatory information****Regulation under the Occupational Safety and Health Act****Harmful Substances Prohibited from Manufacturing**

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Harmful Agents to be kept below Occupational Exposure Limits

Not applicable

Harmful Agents Required to be kept below Permission Levels

Not applicable

Hazardous substances requiring management

Not applicable

Special Management Materials

Not applicable

Controlled Substances Subject to Environment Monitoring

Not applicable

Controlled Substances Subject to Health Examination

Not applicable

Hazardous Substances Subject to Process Safety Management (PSM) Reporting Obligation

Not applicable

K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 1)

Not applicable

K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 9)

Not applicable

Regulation under the Chemicals Control Act**Restricted Chemicals**

Not applicable

Prohibited Chemicals

Not applicable

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Toxic Release Inventory

Not applicable

Accident Precaution Chemicals

Not applicable

Chemicals of Acute and Chronic Hazard to Human Health and the Environment**Substances Acutely hazardous to humans**

Not applicable

Substances Chronically hazardous to humans

Not applicable

Substances Hazardous to the environment

Not applicable

Accident Precaution Chemicals

Not applicable

Toxic Release Inventory

Not applicable

Act on Registration and Evaluation of Chemical Substances (K-REACH)**Restricted Chemicals**

Not applicable

Prohibited Chemicals

Not applicable

Substances with Unconfirmed Hazards

Not applicable

Dangerous Substances Safety Management Act

Classification : Group 4, Flammable liquids, Type 3 petroleums, Water insoluble liquid

Hazard rank : Hazardous rank III

Designated Quantity : 2000 liter

Safety Warning : Keep away from fire

Waste Control Act

Industrial general wastes

Follow article 13 of the act to dispose the product waste

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Other requirements in domestic and other countries**The ingredients of this product are reported in the following inventories:**

EU REACH	: This product is in full compliance according to REACH regulation 1907/2006/EC.
CH INV	: On the inventory, or in compliance with the inventory
TSCA	: On or in compliance with the active portion of the TSCA inventory
DSL	: On the inventory, or in compliance with the inventory
AU AIIC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
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.
PICCS	: On the inventory, or in compliance with the inventory
TW TCSI	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

16. OTHER INFORMATION**Further information**

Issuing date : 2009-10-27

Revision number and date

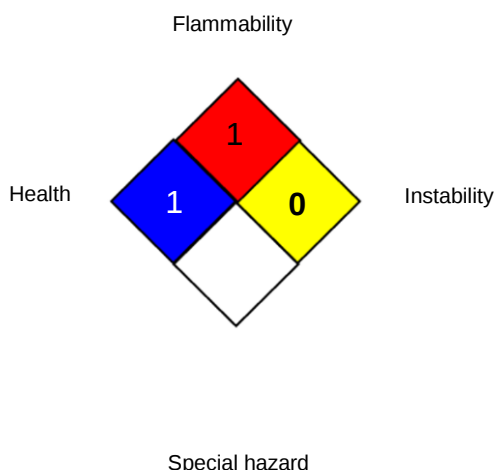
Number of Revision	: 1.15
Revision Date	: 2026-08-03
Other information	: None.
Date format	: yyyy/mm/dd

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NFPA:**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authori-

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zation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

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