# AlphaPlus® C16-18 ISA



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

**Product information**

| | | |
|---|---|---|
| Product Name | : | AlphaPlus® C16-18 ISA |
| Material | : | 1104271, 1037045, 1037042, 1037044, 1037046, 1037043, 1037040, 1037041, 1037047 |
| Use | : | Drilling Fluid Additive |
| **Company** | : | Chevron Phillips Chemical Company LP<br>Normal Alpha Olefins (NAO)<br>9500 Lakeside Blvd.<br>The Woodlands, TX 77381 |

**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
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
Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)
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 |

## SECTION 2: Hazards identification

**Classification of the substance or mixture**
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

**Classification**
: Aspiration hazard, Category 1

**Labeling**

Symbol(s) :



Signal Word : Danger

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

Precautionary Statements :
**Response:**
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
**Storage:**
P405 Store locked up.
**Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity:**

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## SECTION 3: Composition/information on ingredients

Synonyms : Isomerized C16 & C18

Molecular formula : UVCB

| Component | CAS-No. | Weight % |
|---|---|---|
| Hexadecene | 26952-14-7 | 60 - 70 |
| Octadecene | 27070-58-2 | 30 - 40 |

## SECTION 4: First aid measures

General advice : Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Call a physician or poison control center immediately. If unconscious, place in recovery position and seek medical advice.

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. 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 : 130°C (266°F)
Method: Cleveland Open Cup

Autoignition temperature : 227°C (441°F)

Unsuitable extinguishing media : High volume water jet.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

| | | |
|---|---|---|
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Fire and explosion protection | : | Normal measures for preventive fire protection. |

## SECTION 6: Accidental release measures

| | | |
|---|---|---|
| Personal precautions | : | Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. |
| 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 | : | Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. 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 | : | Prevent unauthorized access. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. |
| Use | : | Drilling Fluid Additive |

## SECTION 8: Exposure controls/personal protection

**Engineering measures**

Adequate ventilation to control airborned 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 | : | 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:. Full-Face Supplied-Air Respirator. 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. |
| 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. |
| Skin and body protection | : | Choose body protection according to the amount and concentration of the substance and the task performed at the work place. Appropriate PPE may include:. Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus. Footwear protecting against chemicals. |
| Hygiene measures | : | Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product. |

## SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

**Appearance**

| | | |
|---|---|---|
| Form | : | liquid |
| Physical state | : | liquid |
| Color | : | Clear, colorless to light yellow |

**Safety data**

| | | |
|---|---|---|
| Flash point | : | 130°C (266°F)<br>Method: Cleveland Open Cup |
| Lower explosion limit | : | No data available |
| Upper explosion limit | : | No data available |
| Oxidizing properties | : | no |

| | | |
|---|---|---|
| Autoignition temperature | : | 227°C (441°F) |
| Molecular formula | : | UVCB |
| Molecular weight | : | Varies |
| pH | : | Not applicable |
| Freezing point | : | <-10°C (<14°F) |
| Pour point | | No data available |
| Boiling point/boiling range | : | 270°C (518°F) |
| Vapor pressure | : | 0.01 PSI<br>at 100°C (212°F) |
| Relative density | : | 0.79<br>at 15.6 °C (60.1 °F) |
| Density | : | 0.76 G/ML |
| Water solubility | : | Soluble in hydrocarbon solvents; insoluble in water. |
| Partition coefficient: n-octanol/water | : | log Pow: 7.6 - 8.7 |
| Viscosity, kinematic | : | 3 - 3.7 cSt<br>at 40°C (104°F) |
| Relative vapor density | : | 8<br>(Air = 1.0) |
| Evaporation rate | : | No data available |
| Conductivity | : | 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** : 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.

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

## SECTION 11: Toxicological information

**AlphaPlus® C16-18 ISA**
**Acute oral toxicity** : LD50 Oral: > 5,000 mg/kg
Species: Rat
Method: Acute toxicity estimate

**AlphaPlus® C16-18 ISA**
**Acute inhalation toxicity** : No data available

**AlphaPlus® C16-18 ISA**
**Acute dermal toxicity** : LD50 Dermal: > 2,000 mg/kg
Method: Acute toxicity estimate

**AlphaPlus® C16-18 ISA**
**Skin irritation** : Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

**AlphaPlus® C16-18 ISA**
**Eye irritation** : No adverse effects expected. Information refers to the main ingredient.

**AlphaPlus® C16-18 ISA**
**Sensitization** : Contains no substance or substances classified as sensitizing.

**AlphaPlus® C16-18 ISA**
**Repeated dose toxicity** : No data available

**Genotoxicity in vitro**

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

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

Test Type: Unscheduled DNA synthesis assay
Method: OECD Guideline 473
Result: negative

Octadecene Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Escherichia coli - reverse mutation

assay)
Result: negative

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

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

Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 473
Result: negative

Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 473
Result: negative

**Genotoxicity in vivo**

Hexadecene : Test Type: Mouse micronucleus assay
Method: Mutagenicity (micronucleus test)
Result: negative

Octadecene Test Type: Mouse micronucleus assay
Species: Mouse
Dose: 500, 1,000, or 2,000 mg/kg
Method: Mutagenicity (micronucleus test)
Result: negative

Test Type: Micronucleus test
Species: Mouse
Dose: 1,000, 10,000, 25000 ppm
Method: Mutagenicity (micronucleus test)
Result: negative

Test Type: Micronucleus test
Species: Mouse
Dose: 1,000, 10,000, 25,000 ppm
Method: Mutagenicity (micronucleus test)
Result: negative

**AlphaPlus® C16-18 ISA**
**Reproductive toxicity** : This information is not available.

**AlphaPlus® C16-18 ISA**
**Developmental Toxicity** : This information is not available.

**AlphaPlus® C16-18 ISA**
**Aspiration toxicity** : If swallowed or vomited, material may be aspirated into the

lungs and cause chemical pneumonitis or pulmonary edema.

**CMR effects**

| | | |
|---|---|---|
| Hexadecene | : | Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.<br>Reproductive toxicity: Animal testing did not show any effects on fertility. |
| Octadecene | | Carcinogenicity: Not classifiable as a human carcinogen.<br>Mutagenicity: Did not show mutagenic effects in animal experiments.<br>Teratogenicity: Did not show teratogenic effects in animal experiments.<br>Reproductive toxicity: No toxicity to reproduction |

**AlphaPlus® C16-18 ISA**
**Further information** : Solvents may degrease the skin.

## SECTION 12: Ecological information

**Ecotoxicity effects**
**Toxicity to fish**

| | | |
|---|---|---|
| Hexadecene | : | LL50: > 1,000 mg/l<br>Exposure time: 96 h<br>Species: Cyprinodon variegatus (sheepshead minnow)<br>static test Method: OECD Test Guideline 203<br>Information given is based on data obtained from similar substances. |
| Octadecene | | LL50: > 1000 mg/L<br>Exposure time: 96 h<br>Species: Cyprinodon variegatus (sheepshead minnow)<br>static test Test substance: no<br>Method: OECD Test Guideline 203<br>Information given is based on data obtained from similar substances. |

**Toxicity to daphnia and other aquatic invertebrates**

| | | |
|---|---|---|
| Hexadecene | : | EL50: > 1,000 mg/l<br>Exposure time: 96 h<br>Species: Mysidopsis bahia (mysid shrimp)<br>static test |
| Octadecene | | EL50: > 1000 mg/L<br>Exposure time: 48 h<br>Species: Acartia tonsa (Marine Copepod)<br>static test |

**Toxicity to algae**

| | | |
|---|---|---|
| Hexadecene | : | EL50: > 1,000 mg/l<br>Exposure time: 72 h<br>Species: Skeletonema costatum (marine diatom)<br>static test |
| Octadecene | | EL50: > 1000 mg/L<br>Exposure time: 72 h |

Species: Skeletonema costatum (Marine Algae)
static test Information given is based on data obtained from similar substances.

Biodegradability : This material is expected to be readily biodegradable.

Elimination information (persistence and degradability)

Bioaccumulation

Octadecene : This material is not expected to bioaccumulate.

Mobility : No data available

Results of PBT assessment : Product does not contain substances which are persistent, bioaccumulative, and toxic (PBT) at levels of 0.1% or higher., Product does not contain substances which are very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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

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.

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

**Maritime transport in bulk according to IMO instruments**

## SECTION 15: Regulatory information

**National legislation**

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)
Aspiration hazard

CERCLA Reportable : This material does not contain any components with a CERCLA

| | | |
|---|---|---|
| Quantity | | RQ. |
| SARA 302 Reportable Quantity | : | This material does not contain any components with a SARA 302 RQ. |
| SARA 302 Threshold Planning Quantity | : | This material does not contain any components with a section 302 EHS TPQ. |
| SARA 304 Reportable Quantity | : | This material does not contain any components with a section 304 EHS RQ. |
| SARA 313 Components | : | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |

**Clean Air Act**

| | | |
|---|---|---|
| Ozone-Depletion Potential | : | This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

**US State Regulations**

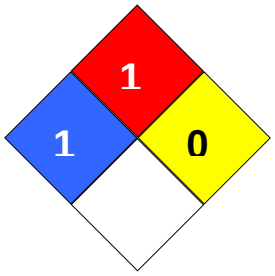
| | | |
|---|---|---|
| Pennsylvania Right To Know | : | Hexadecene - 26952-14-7<br>Octadecene - 27070-58-2<br>Hexadecene, Branched - 182636-01-7<br>Branched Octadecene - 182636-02-8 |
| California Prop. 65 Components | : | This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects. |

**Notification status**

| | | |
|---|---|---|
| Europe EU REACH | : | Not in compliance with the inventory |
| Switzerland CH INV | : | Not in compliance with the inventory |
| United States of America (USA) US TSCA | : | On or in compliance with the active portion of the TSCA inventory |
| Canada CA. NDSL | : | This product contains one or several components listed in the Canadian NDSL. |
| Australia AU AIIC | : | Not in compliance with the inventory |
| New Zealand NZ NZIoC | : | Not in compliance with the inventory |
| Japan JP ENCS | : | On the inventory, or in compliance with the inventory |
| Japan JP ISHL | : | Not in compliance with the inventory |
| Korea KR 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. |
| Philippines PH PICCS | : | On the inventory, or in compliance with the inventory |
| Taiwan TW TCSI | : | On the inventory, or in compliance with the inventory |
| China CN IECSC | : | On the inventory, or in compliance with the inventory |
| Other TH TECI | : | Not in compliance with the inventory |

## SECTION 16: Other information

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




**Revision Date** : 2026-11-03
**Date of last issue** : 2025-08-20

Print Date : 2026-11-09

**Further information**

Legacy SDS Number : 5861

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% |
| AIIC | Australian Inventory of Industrial Chemicals | 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% | ATE | Acute toxicity estimate |