SAFETY DATA SHEET

AlphaPlus® C16-18 ISA

Version 1.12

Revision Date 2022-10-17

AlphaPlus Normal Alpha Olefins

| TION 1: Identification | of the substance/mixture and of the company/undertaking |
|--|--|
| Product information | |
| Product Mame Material | AlphaPlus® C16-18 ISA 1104271, 1037045, 1037042, 1037044, 1037046, 1037043, 1037040, 1037041, 1037047 |
| Use | : Drilling Fluid Additive |
| Company | Chevron Phillips Chemical Company LP Normal Alpha Olefins (NAO) 10001 Six Pines Drive The Woodlands, TX 77380 |
| Emergency telephone | »: |
| Asia: CHEMWATCH Mexico CHEMTREC South America SOS Argentina: +(54)-113 EUROPE: BIG +32. Austria: VIZ +43 1 4 Belgium: 070 245 24 Bulgaria: +359 2 91 Croatia: +3851 2348 Cyprus: 1401 Czech Republic: To Denmark: Danish P Estonia: BIG +32.14 Finland: 0800 147 1 France: ORFILA nu Germany: BIG +32.14 Finland: 543 2222 (2 Ireland: 543 2222 (2 Ireland: BIG +32.14 Italy: BIG +32.14.58 Latvia: State Fire ar Poisoning and Drug 67042473. (24 hou Liechtenstein: BIG + | ernational) 24.9300 or 703.527.3887(int'l) 1 (+612 9186 1132) China: 0532 8388 9090 C 01-800-681-9531 (24 hours) S-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600 59839431 14.584545 (phone) or +32.14583516 (telefax) 106 43 43 (24 hours/day, 7 days/week) 45 (24 hours/day, 7 days/week) 45 (24 hours/day, 7 days/week) 54 233 8 342 (24 hours/day, 7 days/week) xicological Information Center +420 224 919 293, +420 224 915 402 oison Center (Giftlinjen): +45 8212 1212 4.584545 (phone) or +32.14583516 (telefax) 11 09 471 977 (24 hours/day) mber (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week) 14.584545 (phone) or +32.14583516 (telefax) 7793777 (24 hours/day, 7 days/week) 24 hours/day, 7 days/week) 2584545 (phone) or +32.14583516 (telefax) 7793777 (24 hours/day, 7 days/week) 24 hours/day, 7 days/week) 2584545 (phone) or +32.14583516 (telefax) 7693777 (24 hours/day, 7 days/week) 24 hours/day, 7 days/week) 2584545 (phone) or +32.14583516 (telefax) 7693777 (24 hours/day, 7 days/week) 2584545 (phone) or +32.14583516 (telefax) 7693777 (24 hours/day, 7 days/week) 2584545 (phone) or +32.14583516 (telefax) 7793777 (24 hours/day, 7 days/week) 2584545 (phone) or +32.14583516 (telefax) 7693777 (24 hours/day, 7 days/week) 2694545 (phone) or +32.14583516 (telefax) 7793777 (24 hours/day, 7 days/week) 2793777 (24 hours/day, 7 days/week) 289545 (phone) or +32.14583516 (telefax) 7793777 (24 hours/day, 7 days/week) 2994 hours/day, 7 days/week) 2995 (phone) or +32.14583516 (telefax) 7995 (phone) or +32.14 |
| Number:10000001194 | 9 1/14 |
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| Malta: +356 2395 2000 The Netherlands: NVIC: Norway: 22 59 13 00 (24 Poland: BIG +32.14.5845 Portugal: CIAV phone nu Romania: +40213183606 Slovakia: +421 2 5477 4 Slovenia: Phone number | 2 5500 (24 hours/day, 7 days/week) +31 (0)88 755 8000 hours/day, 7 days/week) 545 (phone) or +32.14583516 (telefax) imber: +351 800 250 250 6 166 :: 112 ncy Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 |
|--|--|
| Responsible Department E-mail address Website | Product Safety and Toxicology Group SDS@CPChem.com www.CPChem.com |
| ECTION 2: Hazards identifica | tion |
| • | tance or mixture sified in accordance with the hazard communication standard 29 CFR bels contain all the information as required by the standard. 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: | Disposal: P501 Dispose of contents/ container to an approved waste |
| Carcinogenicity: IARC NTP | Disposal: P501 Dispose of contents/ container to an approved waste |

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| | by NTP. |
| CTION 3: Composition/inforr | nation on ingredients |
| Synonyms | : Isomerized C16 & C18 |
| Molecular formula | : UVCB |
| Component Hexadecene Octadecene | CAS-No. Weight % 26952-14-7 60 - 70 27070-58-2 30 - 40 |
| CTION 4: First aid measures | |
| General advice | : Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Materia 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. |
| TION 5: Firefighting measu | res |
| 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 |
| S Number:100000011949 | 3/14 |

| contaminated fire extinguishing water must be disposed of i accordance with local regulations. Fire and explosion protection protection CTION 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 leaka or spillage if safe to do so. If the product contaminates rive and lakes or drains inform respective authorities. Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. CTION 7: Handling and storage : Avoid formation of aerosol. Do not breathe vapors/dust. Ar contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibite in the application area. Provide sufficient air exchange and exhaust in work rooms. Dispose of rinse water in accordan with local and national regulations. Advice on protection against fire and explosion : Normal measures for preventive fire protection. Storage : Prevent unauthorized access. Keep container tightly closed a dry and well-ventilated place. Containers which are open must be carefully resealed and kept upright to prevent leaka | sion 1.12 Fire and explosion protection CTION 6: Accidental release means Personal precautions Environmental precautions Methods for cleaning up | Normal measures for preventive fire protection. easures Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. 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. Soak up with inert absorbent material (e.g. sand, silica gel, acid |
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| against fire and explosion Storage Requirements for storage areas and containers : Prevent unauthorized access. Keep container tightly closed a dry and well-ventilated place. Containers which are open must be carefully resealed and kept upright to prevent leaka | Advice on safe handling : | 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 |
| Requirements for storage : Prevent unauthorized access. Keep container tightly closed a dry and well-ventilated place. Containers which are open must be carefully resealed and kept upright to prevent leaka | | Normal measures for preventive fire protection. |
| areas and containers a dry and well-ventilated place. Containers which are open must be carefully resealed and kept upright to prevent leaka | Storage | |
| materials must comply with the technological safety standar | | 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 | Use : | Drilling Fluid Additive |
| CTION 8: Exposure controls/personal protection | TION 8: Exposure controls/pe | ersonal protection |

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| 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. |
| TION 9: Physical and cher | nical properties |
| Information on basic phys | sical and chemical properties |
| Appearance | |
| Form Physical state Color | : liquid : liquid : Clear, colorless to light yellow |
| Safety data | |
| Flash point | : 130°C (266°F) 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 |
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| Molecular weight | : Varies |
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| рН | : 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 at 100°C (212°F) |
| Relative density | : 0.79 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 | : No data available |
| Viscosity, kinematic | : 3 - 3.7 cSt at 40°C (104°F) |
| Relative vapor density | : 8 (Air = 1.0) |
| Evaporation rate | : No data available |
| CTION 10: Stability and read | ctivity |
| | |
| 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 r | 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. |
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| TION 11: Toxicological info | rmation |
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| 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 |
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| haPlus® C16-18 IS | A Revision Date 2022-1 |
| | 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 | |

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| Hexadecene | : Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Reproductive toxicity: Animal testing did not show any effects on fertility. |
| Octadecene | 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 |
| AlphaPlus® C16-18 ISA Further information | : Solvents may degrease the skin. |
| TION 12: Ecological inform | ation |
| Ecotoxicity effects Toxicity to fish | |
| Hexadecene | LL50: > 1,000 mg/l Exposure time: 96 h Species: Cyprinodon variegatus (sheepshead minnow) static test Method: OECD Test Guideline 203 Information given is based on data obtained from similar substances. |
| Octadecene | LL50: > 1000 mg/L Exposure time: 96 h Species: Cyprinodon variegatus (sheepshead minnow) static test Test substance: no Method: OECD Test Guideline 203 Information given is based on data obtained from similar substances. |
| Toxicity to daphnia and oth | her aquatic invertebrates |
| Hexadecene | : EL50: > 1,000 mg/l Exposure time: 96 h Species: Mysidopsis bahia (mysid shrimp) static test |
| Octadecene | EL50: > 1000 mg/L Exposure time: 48 h Species: Acartia tonsa (Marine Copepod) static test |
| Toxicity to algae | |
| Hexadecene | : EL50: > 1,000 mg/l Exposure time: 72 h Species: Skeletonema costatum (marine diatom) static test |
| Octadecene | EL50: > 1000 mg/L Exposure time: 72 h Species: Skeletonema costatum (Marine Algae) static test Information given is based on data obtained from |
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| Biodegradability | This material is expected to be readily biodegradable. | |
|---|--|--|
| Elimination information (persis | ce and degradability) | |
| Bioaccumulation | | |
| Octadecene | This material is not expected to bioaccumulate. | |
| Mobility | No data available | |
| Results of PBT assessment | This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT)., This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB). | |
| Additional ecological information Ecotoxicology Assessment | No data available | |
| 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. | |

similar substances.

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.

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| | DEPARTMENT OF TRANSPORTATION) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY. |
|---------------------------------|---|
| | NAL MARITIME DANGEROUS GOODS) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY. |
| | I R TRANSPORT ASSOCIATION) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY. |
| | ANGEROUS GOODS BY ROAD (EUROPE)) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR THIS AGENCY. |
| RID (REGULATIONS CON | CERNING THE INTERNATIONAL TRANSPORT OF |
| DANGEROUS GOODS (EL | IROPE)) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR |
| TRANSPORTATION BY | |
| | |
| | MENT CONCERNING THE INTERNATIONAL CARRIAGE BY INLAND WATERWAYS) |
| | A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR |
| | |
| Other information | : OLEFINS (C13 +, all isomers), S.T. 2, Cat.Y |
| Maritime transport in bulk | according to IMO instruments |
| SECTION 15: Regulatory inform | nation |
| National legislation | |
| SARA 311/312 Hazards | : Acute toxicity (any route of exposure) Aspiration hazard |
| 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. |
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| sion 1.12 | Revision Date 2022-10 |
| 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 | |
| Potential Class | roduct neither contains, nor was manufactured with a Class I or II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR Jopt. A, App.A + B). |
| This product does not contai Act Section 112 (40 CFR 61 | n any hazardous air pollutants (HAP), as defined by the U.S. Clean A). |
| | n any chemicals listed under the U.S. Clean Air Act Section 112(r) for on (40 CFR 68.130, Subpart F). |
| This product does not contai Intermediate or Final VOC's | n any chemicals listed under the U.S. Clean Air Act Section 111 SOC (40 CFR 60.489). |
| US State Regulations | |
| Pennsylvania Right To Know | : Hexadecene - 26952-14-7 Octadecene - 27070-58-2 |
| | Hexadecene, Branched - 182636-01-7 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. |
| S Number:100000011949 | 12/14 |

| phaPlus® C16-18 ISA | | | SAFETY DATA SHE |
|---|---|---|--|
| rsion 1.12 | | | Revision Date 2022-10 |
| Notification status Europe REACH Switzerland CH INV United States of America (USA TSCA Canada NDSL Other AIIC New Zealand NZIoC Japan ENCS Korea KECI | : Not in A) : On or TSCA : This p in the : Not in : Not in : On the : A subs notifie by CP Import permit thems amoun | compliance wi in compliance inventory roduct contains Canadian NDS compliance wi compliance wi e inventory, or i stance(s) in this d to be register Chem accordin tation or manufi tted provided th elves notified the | th the inventory th the inventory with the active portion of the s one or several components listed SL. th the inventory th the inventory in compliance with the inventory s product was not registered, red, or exempted from registration ng to K-REACH regulations. acture of this product is still ne Korean Importer of Record has he substance or the exported seed the minimum threshold egistered substance(s). |
| Philippines PICCS Taiwan TCSI China IECSC | : On the : On the | e inventory, or i e inventory, or i | in compliance with the inventory in compliance with the inventory in compliance with the inventory |
| NFPA Classification | : Health Hazard: Fire Hazard: 1 Reactivity Haza | | |
| NFPA Classification | Fire Hazard: 1 | | |
| NFPA Classification | Fire Hazard: 1 | | |
| Further information | Fire Hazard: 1 | | |
| Further information Legacy SDS Number | Fire Hazard: 1 Reactivity Haza | ard: 0 | e margin. This version replaces all |
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| Further information Legacy SDS Number Significant changes since the I previous versions. The information in this SDS per The information provided in thi information and belief at the da guidance for safe handling, us not to be considered a warrant specific material designated ar other materials or in any proce | Fire Hazard: 1 Reactivity Haza : 5861 last version are hi ertains only to the is Safety Data Sho ate of its publication e, processing, sto ty or quality speci- ind may not be val ess, unless specifion | ard: 0 ghlighted in the product as ship eet is correct to on. The informat fication. The inf id for such mat ed in the text. <u>acronyms usec</u> | e margin. This version replaces all oped. the best of our knowledge, ation given is designed only as a tation, disposal and release and is formation relates only to the terial used in combination with any |
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| Further information Legacy SDS Number Significant changes since the I previous versions. The information in this SDS per The information provided in this information and belief at the daguidance for safe handling, us not to be considered a warrant specific material designated ar other materials or in any proces Key or legend to a ACGIH American Configovernment Internation Substances | Fire Hazard: 1 Reactivity Haza : 5861 last version are hi ertains only to the is Safety Data Sho ate of its publications e, processing, sto ty or quality speci- ind may not be val ess, unless specific ubbreviations and erence of dustrial Hygienists | ard: 0 ghlighted in the product as ship eet is correct to on. The informator id for such mat ed in the text. acronyms used LD50 | e margin. This version replaces all oped. o the best of our knowledge, ation given is designed only as a tation, disposal and release and is formation relates only to the terial used in combination with any d in the safety data sheet Lethal Dose 50% Lowest Observed Adverse Effect |

SAFETY DATA SHEET

Version 1.12

| | Substances List | | 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% | | |