

AlphaPlus® C24-28

Version 2.13

Revision Date 2023-01-26

According to Regulation (EC) No. 1907/2006, Regulation (EC) No. 2020/878

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Product information**

Product Name : AlphaPlus® C24-28
Material : 1083881, 1037065, 1037066, 1037067, 1036986, 1037068

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
Alpha Olefin Fraction, C24-28	93924-11-9 300-203-7	Chevron Phillips Chemical Company LP 01-2119485392-33-0000

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

Relevant Identified Uses : Manufacture
Supported Use as an intermediate
Formulation
Other consumer uses

1.3**Details of the supplier of the safety data sheet**

Company : Chevron Phillips Chemical Company LP
Normal Alpha Olefins (NAO)
10001 Six Pines Drive
The Woodlands, TX 77380

Local : Chevron Phillips Chemicals International N.V.
Airport Plaza (Stockholm Building)
Leonardo Da Vincilaan 19
1831 Diegem
Belgium

SDS Requests: (800) 852-5530
Responsible Party: Product Safety Group
Email:sds@cpchem.com

1.4

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

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

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

SECTION 2: Hazards identification**2.1**

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

Not a hazardous substance or mixture.

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

Not a hazardous substance or mixture.

2.3**Other hazards**Results of PBT and vPvB
assessment: This substance/mixture contains no components
considered to be either persistent, bioaccumulative and
toxic (PBT), or very persistent and very bioaccumulative
(vPvB) at levels of 0.1% or higher.**SECTION 3: Composition/information on ingredients****3.1 - 3.2****Substance or Mixture**Synonyms : C24-C28 Alpha Olefin Fraction
NAO 24-28

Molecular formula : UVCB

Hazardous ingredients

Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]	Specific Conc. Limits, M-factors and ATEs
Alpha Olefin Fraction, C24-28	93924-11-9 300-203-7		100	

Contains no hazardous ingredients according to GHS. :

SECTION 4: First aid measures**4.1****Description of first-aid measures**

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

If inhaled : If unconscious, place in recovery position and seek medical
advice. If symptoms persist, call a physician.In case of eye contact : Remove contact lenses. Protect unharmed eye. If eye
irritation persists, consult a specialist.If swallowed : Keep respiratory tract clear. Do not give milk or alcoholic
beverages. Never give anything by mouth to an unconscious
person. If symptoms persist, call a physician.**4.2 Most important symptoms and effects, both acute and delayed****Notes to physician**

Symptoms : No data available.

Risks : No data available.

4.3 Indication of any immediate medical attention and special treatment needed

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Treatment : No data available.

SECTION 5: Firefighting measures

Flash point : 218°C (424°F)
Method: PMCC

Autoignition temperature : 249°C (480°F)

5.1**Extinguishing media**

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2**Special hazards arising from the substance or mixture**

Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.

5.3**Advice for firefighters**

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

Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire and explosion protection : Provide appropriate exhaust ventilation at places where dust is formed.

SECTION 6: Accidental release measures**6.1****Personal precautions, protective equipment and emergency procedures**

Personal precautions : Avoid dust formation.

6.2**Environmental precautions**

Environmental precautions : No special environmental precautions required.

6.3**Methods and materials for containment and cleaning up**

Methods for cleaning up : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4**Reference to other sections**

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

A quantitative risk assessment is not required for the environment.

A quantitative risk assessment is not required for human health.

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SECTION 7: Handling and storage**7.1****Precautions for safe handling
Handling**

- Advice on safe handling : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.

7.2**Conditions for safe storage, including any incompatibilities****Storage**

- Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.
- Advice on common storage : No materials to be especially mentioned.

SECTION 8: Exposure controls/personal protection**8.1****Control parameters**

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

8.2**Exposure controls
Engineering measures**

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

- Respiratory protection : 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 Organic Vapors, Dusts and Mists. A positive

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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. Safety glasses.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Lightweight protective clothing.

Hygiene measures : General industrial hygiene practice.

A quantitative risk assessment is not required for the environment.

A quantitative risk assessment is not required for human health.

SECTION 9: Physical and chemical properties**9.1****Information on basic physical and chemical properties****Appearance**

Form : Wax., solid
Physical state : solid
Color : White
Odor : no odor

Safety data

Flash point : 218°C (424°F)
Method: PMCC

Lower explosion limit : No data available

Upper explosion limit : No data available

Oxidizing properties : no

Autoignition temperature : 249°C (480°F)

Molecular formula : UVCB

Molecular weight : Varies

pH : Not applicable

Melting point/range : 63°C (145°F)
Method: ASTM D-87

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Boiling point/boiling range	: 390-430°C (734-806°F)
Vapor pressure	: < 0,01 kPa at 65°C (149°F)
Relative density	: 0,82 at 15,6 °C (60,1 °F)
Density	: 821 kg/m3 at 15°C (59°F) 799 kg/m3 at 50°C (122°F)
Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 2,5 cSt at 98,9°C (210,0°F)
Relative vapor density	: 0,82 at 15,6°C (60,1°F)
Evaporation rate	: Not applicable

SECTION 10: Stability and reactivity**10.1**

Reactivity : Stable at normal ambient temperature and pressure.

10.2

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

10.3**Possibility of hazardous reactions**

Hazardous reactions : Further information: Stable under recommended storage conditions., No hazards to be specially mentioned.

10.4

Conditions to avoid : No data available.

10.5

Materials to avoid : No data available.

10.6

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

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SECTION 11: Toxicological information**11.1****Information on toxicological effects****Acute oral toxicity**

Alpha Olefin Fraction, C24-28 : LD50: >2020 mg/kg
Species: Rat
Information given is based on data obtained from similar substances.

Acute inhalation toxicity

Alpha Olefin Fraction, C24-28 : Not classified
Based on data from similar materials

Acute dermal toxicity

Alpha Olefin Fraction, C24-28 : LD50: > 2020 mg/kg
Species: Rabbit
Method: OECD Test Guideline 402
Information given is based on data obtained from similar substances.

Skin irritation

Alpha Olefin Fraction, C24-28 : No skin irritation
Information given is based on data obtained from similar substances.

Eye irritation

Alpha Olefin Fraction, C24-28 : No eye irritation
Information given is based on data obtained from similar substances.

Sensitization

Alpha Olefin Fraction, C24-28 : Did not cause sensitization on laboratory animals.
Information given is based on data obtained from similar substances.

Repeated dose toxicity

Alpha Olefin Fraction, C24-28 : 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 d/wk
NOEL: 1000 mg/kg bw/day

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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/d, 5 d/wk
NOEL: 3000 ppm

Genotoxicity in vitro

Alpha Olefin Fraction, C24-28

: Test Type: E. Coli bacterial reverse mutation assay
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Escherichia coli - reverse mutation assay)
Result: negative

Test Type: E. Coli bacterial reverse mutation assay
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: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Guideline 473
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Guideline 473
Result: negative

Genotoxicity in vivo

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Alpha Olefin Fraction, C24-28 : Test Type: Mouse micronucleus assay
Species: Mouse
Dose: 500, 1000, 2000 mg/kg
Method: Mutagenicity (micronucleus test)
Result: negative

Test Type: Mouse micronucleus assay
Species: Mouse
Dose: 1000, 10000, 25000 ppm
Method: Mutagenicity (micronucleus test)
Result: negative

Test Type: Mouse micronucleus assay
Dose: 1000, 10000, 25000 ppm
Method: Mutagenicity (micronucleus test)
Result: negative

Reproductive toxicity

Alpha Olefin Fraction, C24-28 : Species: Rat
Sex: male and 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/day
NOAEL F1: 1000 mg/kg/day

Species: Rat
Sex: male and female
Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg/day
Number of exposures: Daily
Test period: 42- 51 days
Method: OECD Guideline 422
NOAEL Parent: 1000 mg/kg/day
NOAEL F1: 1000 mg/kg/day

CMR effects

Alpha Olefin Fraction, C24-28 : Carcinogenicity: Not available
Mutagenicity: Weight of evidence does not support classification as a germ cell mutagen.
Teratogenicity: Not available
Reproductive toxicity: Weight of evidence does not support classification for reproductive toxicity

11.2**Information on other hazards****AlphaPlus® C24-28**

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Further information

Endocrine disrupting properties

- : No data available.
- : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information**12.1****Toxicity****Ecotoxicity effects****Toxicity to fish**

Alpha Olefin Fraction, C24-28 : LL50: > 1000 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

Alpha Olefin Fraction, C24-28 : EL100: 1000 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

Alpha Olefin Fraction, C24-28 : EL50: >1000 mg/l
 Exposure time: 72 h
 Species: Selenastrum capricornutum (algae)
 Method: OECD Test Guideline 201
 Information given is based on data obtained from similar substances.

12.2**Persistence and degradability****Biodegradability**

Alpha Olefin Fraction, C24-28 : This material is not expected to be readily biodegradable.

12.3**Bioaccumulative potential**

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.

12.4**Mobility in soil**

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Mobility : No data available

12.5**Results of PBT and vPvB assessment**

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

12.6**Endocrine disrupting properties**

Endocrine disrupting properties : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7**Other adverse effects**

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

No data available

12.8**Additional Information****Ecotoxicology Assessment**

Short-term (acute) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

Long-term (chronic) aquatic hazard : This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations**13.1****Waste treatment methods**

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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

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SECTION 14: Transport information**14.1 - 14.7****Transport information**

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

When shipment is offered for transport at or above 100°C it is regulated as:

UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., (ALPHA OLEFIN FRACTION, C24-28) , 9, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

When shipment is offered for transport at or above 100°C it is regulated as:

UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., (ALPHA OLEFIN FRACTION, C24-28) , 9, III (218°C)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

When shipment is offered for transport at or above 100°C it is regulated as:

UN3257, 9: NOT PERMITTED FOR TRANSPORT

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

When shipment is offered for transport at or above 100°C it is regulated as:

UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., (ALPHA OLEFIN FRACTION, C24-28) , 9, III , (D)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

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NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

When shipment is offered for transport at or above 100°C it is regulated as:

UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., (ALPHA OLEFIN FRACTION, C24-28) , 9, III

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.

When shipment is offered for transport at or above 100°C it is regulated as:

UN3257, ELEVATED TEMPERATURE LIQUID, N.O.S., (ALPHA OLEFIN FRACTION, C24-28) , 9, III

Other information	: OLEFINS (C13 +, all isomers), S.T. 2, Cat.Y
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Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

15.1

Safety, health and environmental regulations/legislation specific for the substance or mixture
National legislation

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Water hazard class (Germany) : nwg not water endangering

15.2

Major Accident Hazard Legislation : ZEU_SEVES3 Update:
Not applicable

Notification status

Europe REACH	:	This product is in full compliance according to REACH regulation 1907/2006/EC.
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Canada DSL	:	On the inventory, or in compliance with the inventory
Other AICS	:	Not in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory

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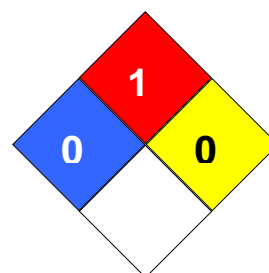
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Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory
Taiwan TCSI	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

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

**Further information**

Legacy SDS Number : PE0027

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%
AIRC	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	PRNT	Presumed Not Toxic

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	Values		
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

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Annex**1. Short title of Exposure Scenario: Manufacture**

- Sector of use : **SU3:** Industrial Manufacturing (all)
- Process category : **PROC1:** Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional controlled exposure
PROC3: Use in closed batch process (synthesis or formulation)
PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
PROC15: Use as laboratory reagent
- Environmental release category : **ERC1, ERC4:** Manufacture of substances, Industrial use of processing aids in processes and products, not becoming part of articles

3. Exposure estimation and reference to its source

Remarks: Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Not applicable

1. Short title of Exposure Scenario: Use as an intermediate

- Sector of use : **SU3:** Industrial Manufacturing (all)
- Process category : **PROC1:** Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional controlled exposure
PROC3: Use in closed batch process (synthesis or formulation)
PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
PROC15: Use as laboratory reagent
- Environmental release category : **ERC6a:** Industrial use resulting in manufacture of another substance (use of intermediates)

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3. Exposure estimation and reference to its source

Remarks: Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Not applicable

1. Short title of Exposure Scenario: Formulation

Sector of use : **SU3:** Industrial Manufacturing (all)

Process category : **PROC1:** Use in closed process, no likelihood of exposure
PROC2: Use in closed, continuous process with occasional controlled exposure
PROC3: Use in closed batch process (synthesis or formulation)
PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC14: Production of preparations or articles by tableting, compression, extrusion, pelletization
PROC15: Use as laboratory reagent

Environmental release category : **ERC2:** Formulation of preparations

3. Exposure estimation and reference to its source

Remarks: Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Not applicable

1. Short title of Exposure Scenario: Other consumer uses

Sector of use : **SU 21:** Consumer uses: Private households (= general public = consumers)

Product category : **PC31:** Polishes and wax blends

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Environmental release category : **ERC8a, ERC8d:** Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

3. Exposure estimation and reference to its source

Remarks: Not applicable

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Not applicable