

Orfom® CO 100 Collector

Version 5.3

Revision Date 2024-01-10

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 : Orfom® CO 100 Collector
 Material : 1129993, 1129992, 1126734, 1122542, 1122063, 1122062,
 1122012, 1106613, 1096244, 1078402, 1090264, 1097072,
 1016857

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
n-Dodecyl Mercaptan	112-55-0 203-984-1	Chevron Phillips Chemicals International NV 01-2119491318-31-0000

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

Relevant Identified Uses Supported : Intermediate: The substance is registered as a Transported Isolated Intermediate with Strictly Controlled Conditions (SCC) defined in Article 18(4) of Regulation EC No. 1907/2006 and must therefore be handled as such. The substance has been registered as Normal Substance for the use as Intermediate under non-Strictly controlled conditions (Maximum tonnage 10mt/y)

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

Company : Chevron Phillips Chemical Company LP
 Mining Chemicals
 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

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Belgium

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

1.4**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

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SECTION 2: Hazards identification**2.1****Classification of the substance or mixture
REGULATION (EC) No 1272/2008**

Skin corrosion, Sub-category 1C	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements

: Prevention:	
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391	Collect spillage.

Hazardous ingredients which must be listed on the label:

- 112-55-0 n-Dodecyl Mercaptan

2.3**Other hazards**

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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.

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.

SECTION 3: Composition/information on ingredients**3.1 - 3.2****Substance or Mixture**

Synonyms : Normal Dodecyl Mercaptan
1-dodecanethiol
NDDM
dodecanethiol

Molecular formula : C₁₂H₂₆S

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
n-Dodecyl Mercaptan	112-55-0 203-984-1	Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	98,5	M [Acute]=1010 M [Chronic]=10 10

For the full text of the H-Statements mentioned in this Section, see Section 16.

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

General advice : Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital.

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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.

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

Treatment : No data available.

SECTION 5: Firefighting measures

Flash point : 133°C (271°F)
Method: closed cup

Autoignition temperature : 230°C (446°F)

5.1**Extinguishing media**

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

Unsuitable extinguishing media : High volume water jet.

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

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

5.3**Advice for firefighters**

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.

Hazardous decomposition products : Carbon oxides. Sulfur oxides.

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

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Personal precautions : Use personal protective equipment. Ensure adequate ventilation.

6.2**Environmental precautions**

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.

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

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.

6.4**Reference to other sections**

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

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

Advice on safe handling : Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

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

Requirements for storage areas and containers : 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.

German storage class : Combustible, corrosive hazardous materials

7.3**Specific End Use**

Use : Intermediate

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SECTION 8: Exposure controls/personal protection**8.1****Control parameters
Ingredients with workplace control parameters****PT**

Componentes	Bases	Valor	Parâmetros de controle	Nota
n-Dodecyl Mercaptan	PT OEL	VLE-MP	0,1 ppm,	SC,

SC Agente com potencial para produzir sensibilização pela via cutânea

IE

Components	Basis	Value	Control parameters	Note
n-Dodecyl Mercaptan	IE OEL	OELV - 8 hrs (TWA)	0,1 ppm,	Sens,

Sens Chemical agents which following exposure may cause sensitisation of the respiratory tract and lead to asthma, rhinitis or extrinsic allergic alveolitis

ES

Componentes	Base	Valor	Parâmetros de control	Nota
n-Dodecyl Mercaptan	ES VLA	VLA-ED	0,1 ppm,	

BE

Bestanddelen	Basis	Waarde	Controleparameters	Opmerking
n-Dodecyl Mercaptan	BE OEL	TGG 8 hr	0,1 ppm, 0,84 mg/m3	

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 Dusts and Mists. 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.

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- Eye protection : Eye wash bottle with pure water.
- 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: Remove and wash contaminated clothing before re-use. Skin should be washed after contact. Complete head face and neck protection. Rubber apron. Footwear protecting against chemicals.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

In case of an accident during maintenance/cleaning, this substance must be handled under Strictly Controlled Conditions (SCC) in accordance with REACH regulation Article 18(4) for transported isolated intermediates.

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

- Physical state : liquid
 Color : Colorless
 Odor : Repulsive

Safety data

- Flash point : 133°C (271°F)
 Method: closed cup
- Lower explosion limit : No data available
- Upper explosion limit : No data available
- Oxidizing properties : no
- Autoignition temperature : 230°C (446°F)
- Molecular formula : C₁₂H₂₆S
- Molecular weight : 202,44 g/mol
- pH : Not applicable
- Melting point/freezing point : No data available
- Pour point : No data available
- Boiling point/boiling range : 270°C (518°F)
- Vapor pressure : 0,00 mbar
 at 25°C (77°F)
- Relative density : No data available
- Water solubility : 0,0054 mg/l

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Method: OECD Test Guideline 105

Partition coefficient: n-octanol/water : No data available

Viscosity, dynamic : 2,98 cP
at 25°C (77°F)Relative vapor density : 1
(Air = 1.0)

Evaporation rate : No data available

9.2**Other information**

Conductivity : No data available

SECTION 10: Stability and reactivity**10.1****Reactivity** : Stable under recommended storage conditions.**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** : Hazardous reactions: Hazardous polymerization does not occur.**10.4****Conditions to avoid** : Heat, sparks, fire, and oxidizing agents.**10.5****Materials to avoid** : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.**10.6****Hazardous decomposition products** : Carbon oxides
Sulfur oxides**Other data** : No decomposition if stored and applied as directed.**SECTION 11: Toxicological information****11.1****Information on toxicological effects****Skin irritation**

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n-Dodecyl Mercaptan : Corrosive after 1 to 4 hours of exposure

Eye irritation

n-Dodecyl Mercaptan : Irreversible effects on the eye

Sensitization

n-Dodecyl Mercaptan : The product is a skin sensitizer, sub-category 1A.

Repeated dose toxicity

n-Dodecyl Mercaptan : Species: Rat
 Application Route: Inhalation
 Dose: 0, 0.43, 1.6, 7.3 ppm
 Exposure time: 4 wk
 NOEL: 0,01 mg/l 1.7 ppm
 Lowest observable effect level: 0,06 mg/l 7.3 ppm
 Target Organs: Skin

Species: Dog
 Application Route: Inhalation
 Dose: 0, 0.44, 1.7, 7.7 ppm
 Exposure time: 4 wk
 NOEL: 1.7 ppm
 Lowest observable effect level: 7.7 ppm

Genotoxicity in vitro

n-Dodecyl Mercaptan : Test Type: Ames test
 Result: negative

Test Type: Sister Chromatid Exchange Assay
 Result: negative

Test Type: Mouse lymphoma assay
 Result: negative

Genotoxicity in vivo

n-Dodecyl Mercaptan : Test Type: Mouse micronucleus assay
 Species: Mouse
 Dose: 1250, 2500, 5000 mg/kg

**Orfom® CO 100 Collector
Aspiration toxicity**

: May be harmful if swallowed and enters airways.

**Orfom® CO 100 Collector
Specific Target Organ
Toxicity (Single Exposure)**

: Remarks: Not classified

**Orfom® CO 100 Collector
Specific Target Organ
Toxicity (Repeated
Exposure)**

: Remarks: Not classified

CMR effects

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n-Dodecyl Mercaptan : Carcinogenicity: Not available
 Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
 Teratogenicity: Animal testing did not show any effects on fetal development.
 Reproductive toxicity: Animal testing did not show any effects on fertility.

11.2**Information on other hazards****Orfom® CO 100 Collector**

Further information : Solvents may degrease the skin.
 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.

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

n-Dodecyl Mercaptan : LC50: > 100 mg/l
 Exposure time: 96 h
 Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates

n-Dodecyl Mercaptan : EC50: 1 - 10 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 Method: OECD Test Guideline 202

Toxicity to algae

n-Dodecyl Mercaptan : EC50: 0,0145 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (green algae)
 Growth inhibition Method: OECD Test Guideline 201

M-Factor

dodecane-1-thiol : M-Factor (Acute Aquat. Tox.) 10
 M-Factor (Chron. Aquat. Tox.) 10

12.2**Persistence and degradability**

Biodegradability

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n-Dodecyl Mercaptan : Result: Not readily biodegradable.
Method: OECD Test Guideline 301
Information given is based on data obtained from similar substances.

12.3**Bioaccumulative potential**

Bioaccumulation

n-Dodecyl Mercaptan : Bioconcentration factor (BCF): 228 - 781,2

12.4**Mobility in soil**

Mobility

n-Dodecyl Mercaptan : After release, adsorbs onto soil.

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 : Very toxic to aquatic life with long lasting effects.

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

Short-term (acute) aquatic hazard
n-Dodecyl Mercaptan : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard
n-Dodecyl Mercaptan : Very toxic to aquatic life with long lasting effects.

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

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

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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 : The product should not be allowed to enter drains, water courses or the soil. 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**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)

UN1760, CORROSIVE LIQUIDS, N.O.S., (N-DODECYL MERCAPTAN), 8, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN1760, CORROSIVE LIQUID, N.O.S., (N-DODECYL MERCAPTAN), 8, III, (133 °C c.c.), MARINE POLLUTANT, (N-DODECYL MERCAPTAN)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN1760, CORROSIVE LIQUID, N.O.S., (N-DODECYL MERCAPTAN), 8, III

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

UN1760, CORROSIVE LIQUID, N.O.S., (N-DODECYL MERCAPTAN), 8, III, (E), ENVIRONMENTALLY HAZARDOUS, (N-DODECYL MERCAPTAN)

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

80, UN1760, CORROSIVE LIQUID, N.O.S., (N-DODECYL MERCAPTAN), 8, III, ENVIRONMENTALLY HAZARDOUS, (N-DODECYL MERCAPTAN)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN1760, CORROSIVE LIQUID, N.O.S., (N-DODECYL MERCAPTAN), 8, III, ENVIRONMENTALLY HAZARDOUS, (N-DODECYL MERCAPTAN)

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Other information	: n- Dodecyl Mercaptan, S.T. 1, Cat. X
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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) 2020/878 of 18 June 2020 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) : WGK 3 highly water endangering

15.2

Major Accident Hazard Legislation : 96/82/EC Update: 2003
Dangerous for the environment
9a
Quantity 1: 100 t
Quantity 2: 200 t

: ZEU_SEVES3 Update:
ENVIRONMENTAL HAZARDS
E1
Quantity 1: 100 t
Quantity 2: 200 t

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) : On TSCA Inventory

TSCA

Canada DSL : All components of this product are on the Canadian DSL

Other AICS : On the inventory, or in compliance with the inventory

New Zealand NZIoC : On the inventory, or in compliance with the inventory

Japan ENCS : On the inventory, or in compliance with the inventory

Korea KECI : All substances in this product were registered, notified to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was included on CPChem's notifications or if the Importer of Record themselves notified the 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

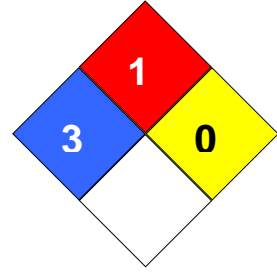
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SECTION 16: Other information

NFPA Classification : Health Hazard: 3
Fire Hazard: 1
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 98010

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	TSCA	Toxic Substance Control Act

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	New Chemical Substances		
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

Full text of H-Statements referred to under sections 2 and 3.

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.