Dimethyl Sulfide

Version 3.3 Revision Date 2023-05-19

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 : Dimethyl Sulfide
Material : 1127778, 1108785, 1073702, 1073703, 1073704, 1103885, 1073705, 1077804, 1089246, 1101535, 1098710, 1084190, 1028766, 1024530, 1024531, 1024532, 1024533, 1024534, 1024535, 1024536

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
Dimethyl Sulfide	75-18-3 200-846-2	Chevron Phillips Chemicals International NV 01-2119487127-32-0001
Dimethyl Sulfide	75-18-3 200-846-2	Chevron Phillips Chemical Company LP 01-2119487127-32-0001

1.2

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

Relevant Identified Uses Supported : Formulation
Use as an intermediate in Spiking
Use as an intermediate in pharma
Injection as odorant in fuels – industrial

1.3

Details of the supplier of the safety data sheet

Company : Chevron Phillips Chemical Company LP
Specialty 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

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

SECTION 2: Hazards identification

2.1

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

Flammable liquids, Category 2	H225: Highly flammable liquid and vapor.

2.2

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.

Precautionary Statements :

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235	Store in a well-ventilated place. Keep cool.

Disposal:

P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:
- 75-18-3 Dimethyl Sulfide

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.

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 : Dimethyl Sulfide Pure
Methyl sulfide
DMS
Di-Methyl Sulfide

Molecular formula : C2H6S

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
Dimethyl Sulfide	75-18-3 200-846-2	Flam. Liq. 2; H225	99 - 100	

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. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

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

In case of skin contact : 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.

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 : -37°C (-35°F)
estimated

Autoignition temperature : 220°C (428°F)

5.1
Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.

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. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products : Carbon oxides. Sulfur oxides.

SECTION 6: Accidental release measures

6.1
Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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 : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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 : Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

7.2

Conditions for safe storage, including any incompatibilities

Storage

Requirements for storage areas and containers : No smoking. 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.

7.3

Specific End Use

Use : For additional details, see the Exposure Scenario in the Annex portion

SECTION 8: Exposure controls/personal protection

8.1

Control parameters
Ingredients with workplace control parameters

SE

Beståndsdelar	Grundval	Värde	Kontrollparametrar	Anmärkning
Dimethyl Sulfide	SE AFS	NGV	1 ppm,	

PT

Componentes	Bases	Valor	Parâmetros de controlo	Nota
Dimethyl Sulfide	PT OEL	VLE-MP	10 ppm,	

LV

Sastāvdaļas	Bāze	Vērtība	Pārvaldības parametri	Piezīme
Dimethyl Sulfide	LV OEL	AER 8 st	50 mg/m3	

LT

Komponentai	Šaltinis	Vertė	Kontrolės parametrai	Pastaba
Dimethyl Sulfide	LT OEL	IPRD	1 ppm,	

IE

Components	Basis	Value	Control parameters	Note
Dimethyl Sulfide	IE OEL	OELV - 8 hrs (TWA)	10 ppm,	

HR

Sastojci	Temelj	Vrijednost	Nadzorni parametri	Bilješka
Dimethyl Sulfide	HR OEL	GVI	5 ppm, 13 mg/m3	koža,

koža Razvrstana kao tvar koja nadražuje kožu (H315) ili je takva napomena navedena u direktivama

ES

Componentes	Base	Valor	Parámetros de control	Nota
Dimethyl Sulfide	ES VLA	VLA-ED	10 ppm,	

EE

Komponendid, osad	Alused	Väärtus	Kontrolliparameetrid	Märkused
Dimethyl Sulfide	EE OEL	Piirnorm	1 ppm,	

BE

Bestanddelen	Basis	Waarde	Controleparameters	Opmerking
Dimethyl Sulfide	BE OEL	TGG 8 hr	10 ppm, 26 mg/m3	

DNEL : End Use: Workers
Routes of exposure: Inhalation
Potential health effects: Chronic effects, Systemic effects
Value: 31,5 mg/m3

DNEL : End Use: Workers
Routes of exposure: Skin contact
Potential health effects: Chronic effects, Systemic effects
Value: 80 mg/kg

DNEL : End Use: Consumers
Routes of exposure: Inhalation
Potential health effects: Chronic effects, Systemic effects
Value: 5,6 mg/m3

PNEC : Fresh water
Value: 0,29 mg/l

PNEC : Marine water
Value: 0,0029 mg/l

PNEC : Fresh water sediment
Value: 0,12 mg/kg

PNEC : Soil
Value: 0,0072 mg/kg

8.2

Exposure controls
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:. Air-Purifying Respirator for Organic Vapors. 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. Tightly fitting safety goggles.
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:. Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

9.1

Information on basic physical and chemical properties

Appearance

Form	:	liquid
Physical state	:	liquid
Color	:	Clear
Odor	:	Repulsive

Safety data

Flash point	:	-37°C (-35°F) estimated

Lower explosion limit	:	2,2 %(V)
Upper explosion limit	:	19,7 %(V)
Oxidizing properties	:	yes
Autoignition temperature	:	220°C (428°F)
Molecular formula	:	C2H6S
Molecular weight	:	62,14 g/mol
pH	:	Not applicable
Pour point	:	No data available
Boiling point/boiling range	:	37°C (99°F)
Vapor pressure	:	15,00 PSI at 38°C (100°F)
Relative density	:	0,85 at 15,6 °C (60,1 °F)
Water solubility	:	7.280 MG/L at 20°C (68°F)
Partition coefficient: n-octanol/water	:	log Pow: 0,84 at 20°C (68°F)
Solubility in other solvents	:	Medium: Water slightly soluble
Viscosity, kinematic	:	0,285 cSt at 20°C (68°F)
Relative vapor density	:	2,1 (Air = 1.0)
Evaporation rate	:	No data available
Percent volatile	:	> 99 % 0,03 %

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.

Hazardous reactions: Vapors may form explosive mixture with air.

10.4

Conditions to avoid : Heat, flames and sparks.

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

Acute oral toxicity

Dimethyl Sulfide : LD50: > 2.000 mg/kg
Species: Rat
Method: OECD Test Guideline 423

Acute inhalation toxicity

Dimethyl Sulfide : LC50: 102 mg/l
Exposure time: 4 h
Species: Rat
Sex: male and female
Test atmosphere: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity

Dimethyl Sulfide : LD50: > 2.000 mg/kg
Method: OECD Test Guideline 402

Skin irritation

Dimethyl Sulfide : No skin irritation

Eye irritation

Dimethyl Sulfide : May irritate eyes.

Sensitization

Dimethyl Sulfide : Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Dimethyl Sulfide : Species: Rat, Male and female
Sex: Male and female
Application Route: Oral diet
Dose: 0, 2.5, 25, 250 mg/kg bw/day
Exposure time: 14 wk
Number of exposures: daily
NOEL: 250 mg/kg
Method: OECD Test Guideline 408
No adverse effects expected

Species: Rat, Male and female
Sex: Male and female
Application Route: inhalation (vapor)
Dose: 0, 0.310, 0.964, 2.783 mg/l
Exposure time: 13 wk (6 h)
Number of exposures: 7 d/wk
NOEL: 2,783 mg/l
Method: OECD Guideline 413
Information given is based on data obtained from similar substances.

Genotoxicity in vitro

Dimethyl Sulfide : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 476
Result: negative

Genotoxicity in vivo

Dimethyl Sulfide : Test Type: In vivo micronucleus test
Species: Mouse
Cell type: Bone marrow
Route of Application: Oral
Dose: 1250, 2500, 5000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Developmental Toxicity

Dimethyl Sulfide : Species: Rat

Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg
Exposure time: GD 6 - 19
Number of exposures: daily
Test period: 20 d
Method: OECD Guideline 414
NOAEL Teratogenicity: 1.000 mg/kg
NOAEL Maternal: 1.000 mg/kg

Dimethyl Sulfide
Aspiration toxicity : May be harmful if swallowed and enters airways.

CMR effects

Dimethyl Sulfide : Carcinogenicity: Not available
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects
Reproductive toxicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

11.2 Information on other hazards

Dimethyl Sulfide
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

Dimethyl Sulfide : LC50: 213 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Dimethyl Sulfide : EC50: 29 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Method: OECD Test Guideline 202

Toxicity to algae

Dimethyl Sulfide : IC50: > 113,7 mg/l

Exposure time: 72 h
Species: Selenastrum capricornutum (algae)
Method: OECD Test Guideline 201

12.2
Persistence and degradability

Biodegradability

Dimethyl Sulfide	:	aerobic Result: Readily biodegradable. 77 % Method: OECD Test Guideline 301

12.3
Bioaccumulative potential

Bioaccumulation

Dimethyl Sulfide	:	No bioaccumulation is to be expected (log Pow <= 4).

12.4
Mobility in soil

Mobility

Dimethyl Sulfide	:	Method: Calculation, Mackay Level III Fugacity Model The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

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	:	Harmful to aquatic life.

12.8
Additional Information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

Dimethyl Sulfide : Harmful to aquatic life.

Long-term (chronic) aquatic hazard
Dimethyl Sulfide : 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.

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. Do not burn, or use a cutting torch on, the empty drum.

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)

UN1164, DIMETHYL SULFIDE, 3, II

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN1164, DIMETHYL SULPHIDE, 3, II, (-37 °C c.c.)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN1164, DIMETHYL SULPHIDE, 3, II

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

UN1164, DIMETHYL SULPHIDE, 3, II, (D/E)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
33,UN1164,DIMETHYL SULPHIDE, 3, II

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1164, DIMETHYL SULPHIDE, 3, II

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 2 water endangering

15.2

Chemical Safety Assessment

Components : dimethyl sulphide 200-846-2

Major Accident Hazard Legislation : 96/82/EC Update: 2003
Extremely flammable
8
Quantity 1: 10 t
Quantity 2: 50 t

: ZEU_SEVES3 Update:
FLAMMABLE LIQUIDS
P5c
Quantity 1: 5.000 t
Quantity 2: 50.000 t

Notification status

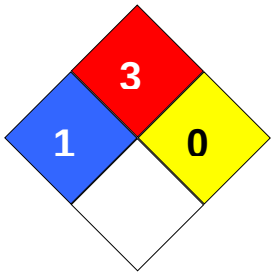
Europe REACH	:	This product is in full compliance according to REACH regulation 1907/2006/EC.
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Australia AIIC	:	On the inventory, 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	:	A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still

permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).

Philippines PICCS	:	On the inventory, or in compliance with the inventory
Taiwan TCSI	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

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



Further information

Legacy SDS Number : 61250

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

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

H225 Highly flammable liquid and vapor.

Annex: Exposure Scenarios

Table of Contents

ES 1: Formulation; Industrial uses (SU3).

1.1. Title section

Exposure Scenario name	:	Formulation
Structured Short Title	:	Formulation; Industrial uses (SU3).

Environment		
CS 1	**Formulation**	ERC2

1.2. Conditions of use affecting exposure

1.2.1. Control of environmental exposure: Formulation of preparations (ERC2)

Amount used (or contained in articles), frequency and duration of use/exposure		
EU tonnage (tonnes/year):	:	80
Regional use tonnage (tonnes/year):	:	80

Technical and organisational conditions and measures
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): Air - minimum efficiency of 97,5 % Water - minimum efficiency of 99,9 %

Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Other conditions affecting environmental exposure		
Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

1.3. Exposure estimation and reference to its source

1.3.1. Environmental release and exposure: Formulation of preparations (ERC2)

Release route	Release rate	Release estimation method
air	0,025 kg/day	ESVOC SPERC 6.1a.v1
water	0,001 kg/day	ESVOC SPERC 6.1a.v1
Soil	0 kg/day	ESVOC SPERC 6.1a.v1

Protection Target	Exposure estimate	RCR
Freshwater	0,00093 mg/l (EUSES v2.1)	0,032
Freshwater sediment	0,00131 mg/kg wet weight (EUSES v2.1)	0,050
Sea water	0,00133 mg/l (EUSES v2.1)	0,46
Sea sediment	0,00187 mg/kg wet weight (EUSES v2.1)	0,718
Soil	0,000428 mg/kg wet weight (EUSES v2.1)	0,067

1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

RMMs and OCs are described in adequate documentation at site level and efficiency is checked on a regular basis.

ES 2: Use as an intermediate in Spiking; Industrial uses (SU3).

2.1. Title section

Exposure Scenario name	:	Use as an intermediate in Spiking
Structured Short Title	:	Use as an intermediate in Spiking; Industrial uses (SU3).

Environment		
CS 1	**Use as an intermediate in Spiking**	ERC6a

2.2. Conditions of use affecting exposure

2.2.1. Control of environmental exposure: Use of intermediate (ERC6a)

Amount used (or contained in articles), frequency and duration of use/exposure		
EU tonnage (tonnes/year):	:	132
Regional use tonnage (tonnes/year):	:	132
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

2.3. Exposure estimation and reference to its source

2.3.1. Environmental release and exposure: Use of intermediate (ERC6a)

Release route	**Release rate**	**Release estimation method**
air	0,005 kg/day	ESVOC SPERC 6.1a.v1
water	0 kg/day	ESVOC SPERC 6.1a.v1
Soil	0,001 kg/day	ESVOC SPERC 6.1a.v1

Protection Target	**Exposure estimate**	**RCR**
Freshwater	0,000140 mg/l (EUSES v2.1)	0,005
Freshwater sediment	0,000196 mg/kg wet weight (EUSES v2.1)	0,008

Sea water	0,0002 mg/l (EUSES v2.1)	0,069
Sea sediment	0,000281 mg/kg wet weight (EUSES v2.1)	0,108
Soil	0,0000589 mg/kg wet weight (EUSES v2.1)	0,009

2.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

RMMs and OCs are described in adequate documentation at site level and efficiency is checked on a regular basis.

ES 3: Use as an intermediate in pharma; Industrial uses (SU3).

3.1. Title section

Exposure Scenario name	:	Use as an intermediate in pharma
Structured Short Title	:	Use as an intermediate in pharma; Industrial uses (SU3).

Environment		
CS 1	**Use as an intermediate in pharma**	ERC6a

3.2. Conditions of use affecting exposure

3.2.1. Control of environmental exposure: Use of intermediate (ERC6a)

Amount used (or contained in articles), frequency and duration of use/exposure		
EU tonnage (tonnes/year):	:	12
Regional use tonnage (tonnes/year):	:	12

Technical and organisational conditions and measures
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): Air - minimum efficiency of 99,5 % Water - minimum efficiency of 99,9 %

Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Other conditions affecting environmental exposure		
Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

3.3. Exposure estimation and reference to its source

3.3.1. Environmental release and exposure: Use of intermediate (ERC6a)

Release route	Release rate	Release estimation method
air	0,5 kg/day	ESVOC SPERC 6.1a.v1
water	0,1 kg/day	ESVOC SPERC 6.1a.v1
Soil	0,1 kg/day	ESVOC SPERC 6.1a.v1

Protection Target	Exposure estimate	RCR
Freshwater	0,000140 mg/l (EUSES v2.1)	0,005
Freshwater sediment	0,000196 mg/kg wet weight (EUSES v2.1)	0,008
Sea water	0,0002 mg/l (EUSES v2.1)	0,069
Sea sediment	0,000281 mg/kg wet weight (EUSES v2.1)	0,108
Soil	0,0000589 mg/kg wet weight (EUSES v2.1)	0,009

3.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

RMMs and OCs are described in adequate documentation at site level and efficiency is checked on a regular basis.

ES 4: Injection as odorant in fuels – industrial; Industrial uses (SU3).

4.1. Title section

Exposure Scenario name	:	Injection as odorant in fuels – industrial
Structured Short Title	:	Injection as odorant in fuels – industrial; Industrial uses (SU3).

Environment		
CS 1	**Injection as odorant in fuels – industrial**	ERC7

4.2. Conditions of use affecting exposure

4.2.1. Control of environmental exposure: Use of functional fluid at industrial site (ERC7)

Amount used (or contained in articles), frequency and duration of use/exposure		
EU tonnage (tonnes/year):	:	80
Regional use tonnage (tonnes/year):	:	80
Technical and organisational conditions and measures		
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of ≥ (%): Air - minimum efficiency of 99,7 % Water - minimum efficiency of 99,9 %		
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Receiving surface water flow	:	18.000 m3/d
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

4.3. Exposure estimation and reference to its source

4.3.1. Environmental release and exposure: Use of functional fluid at industrial site (ERC7)

Release route	Release rate	Release estimation method
air	0,25 kg/day	ESVOC SPERC 6.1a.v1
water	0,001 kg/day	ESVOC SPERC 6.1a.v1
Soil	0 kg/day	ESVOC SPERC 6.1a.v1

Protection Target	Exposure estimate	RCR
Freshwater	0,00943 µg/l (EUSES v2.1)	0
Freshwater sediment	0,0000133 mg/kg wet weight (EUSES v2.1)	0
Sea water	0,0000133 mg/l (EUSES v2.1)	0,005
Sea sediment	0,0000187 mg/kg wet weight (EUSES v2.1)	0,007
Soil	0,00828 µg/kg wet weight (EUSES v2.1)	0,001

4.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

RMMs and OCs are described in adequate documentation at site level and efficiency is checked on a regular basis.