

Version 1.10 Revision Date 2022-04-25

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

Product information

Product Name : Methyl Ethyl Sulfide

Material : 1114339, 1097582, 1069121, 1024544, 1030371

Use : Odorant

Company : Chevron Phillips Chemical Company LP

10001 Six Pines Drive The Woodlands, TX 77380

Local : See Company Address

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)

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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

Classification of the substance or mixture GHS Classification and labelling according to JIS Z 7252-2019 and JIS Z 7253-2019 (GHS 2015)

Classification

: Flammable liquids, Category 2

Serious eye damage/eye irritation, Category 2 Short-term (acute) aquatic hazard, Category 3 Long-term (chronic) aquatic hazard, Category 3

Labeling

Symbol(s) :





Signal Word : Danger

Hazard Statements : H225: Highly flammable liquid and vapor.

H319: Causes serious eye irritation.

H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements : Prevention:

P210: Keep away from heat/ sparks/ open flames/ hot

surfaces. No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting/

equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P264: Wash skin thoroughly after handling.

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P273: Avoid release to the environment.

P280: Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313: If eye irritation persists: Get medical advice/attention.

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.

SECTION 3: Composition/information on ingredients

Synonyms : MES

2-Thiabutane

Molecular formula : C3H8S

ENCS/ISHL
number
(2)-2421 2-2421
2-53

SECTION 4: 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 skin irritation persists, call a physician. If on skin, rinse well

with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water. 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. Take victim immediately to hospital.

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SECTION 5: Firefighting measures

Flash point : -15° C (5°F)

estimated

Autoignition temperature : 195°C (383°F)

Method: EU Method A.15

Suitable extinguishing

media

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

Unsuitable extinguishing

media

: High volume water jet.

Specific hazards during fire

fighting

: Do not allow run-off from fire fighting to enter drains or water

courses

Special protective

equipment for fire-fighters

: Wear self-contained breathing apparatus for firefighting if

necessary.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. 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

: Sulfur oxides.

SECTION 6: Accidental release measures

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.

Environmental precautions : Prevent product from entering drains. Prevent further leakage

or spillage if safe to do so. If the product contaminates rivers

and lakes or drains inform respective authorities.

Methods for cleaning up : 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).

SECTION 7: Handling and storage

Handling

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Advice on safe handling

: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. 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.

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.

Use : Odorant

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

JР

	Components	Basis	Value	Control parameters	Note
ľ	Ethyl Chloride	JP OEL JSOH	OEL-M	100 ppm, 260 mg/m3	

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

Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator 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.

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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

Information on basic physical and chemical properties

Appearance

Form : liquid Physical state : liquid

Color : Clear, colorless

Odor : Pungent

Safety data

Flash point : -15°C (5°F)

estimated

Lower explosion limit : 1.8 %(V)

Upper explosion limit : 13.9 %(V)

Oxidizing properties : No

Autoignition temperature : 195°C (383°F)

Method: EU Method A.15

Thermal decomposition : No data available

Molecular formula : C3H8S

Molecular weight : 76.17 g/mol

pH : Not applicable

Freezing point : No data available

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Pour point No data available

Boiling point/boiling range : 64-67°C (147-153°F)

Vapor pressure : 5.26 PSI

at 37.8°C (100.0°F)

estimated

Relative density : 0.85

at 16 °C (61 °F)

Density : 846 g/l

Water solubility : 6.68 g/l

at 20°C (68°F)

Method: OECD Test Guideline 105

negligible

Partition coefficient: n-

octanol/water

: No data available

Viscosity, kinematic : 0.375 mm2/s

Relative vapor density : 2

(Air = 1.0)

Evaporation rate : 1

Percent volatile : > 99 %

SECTION 10: Stability and reactivity

Reactivity : Stable under recommended storage conditions.

Chemical stability : This material is considered stable under normal ambient and

anticipated storage and handling conditions of temperature

and pressure.

Possibility of hazardous reactions

Hazardous reactions: Hazardous polymerization does not

occur.

Further information: No decomposition if stored and applied as

directed.

Hazardous reactions: Vapors may form explosive mixture with

air.

Conditions to avoid : Heat, flames and sparks.

Thermal decomposition : No data available

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Hazardous decomposition

products

: Sulfur oxides

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

SECTION 11: Toxicological information

Acute oral toxicity

Methyl Ethyl Sulfide : LD50: > 5,000 mg/kg

Species: Rat

Method: OECD Test Guideline 401

Acute inhalation toxicity

Methyl Ethyl Sulfide : LC50: > 21.7 mg/l

Species: Rat

Test atmosphere: vapor

Method: OECD Test Guideline 403

Skin irritation

Methyl Ethyl Sulfide : Mild skin irritation

Eye irritation

Methyl Ethyl Sulfide : Eye irritation

Sensitization

Methyl Ethyl Sulfide : Did not cause sensitization on laboratory animals.

Genotoxicity in vitro

Methyl Ethyl Sulfide : Test Type: Ames test

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

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

CMR effects

Ethyl Chloride : Carcinogenicity: Limited evidence of carcinogenicity in animal

studies

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Further information : Solvents may degrease the skin.

SECTION 12: Ecological information

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Toxicity to fish

Methyl Ethyl Sulfide : LC50: > 49.8 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Methyl Ethyl Sulfide : EC50: 16 mg/l

Exposure time: 48 h Species: Daphnia

Method: OECD Test Guideline 202

Toxicity to algae

Methyl Ethyl Sulfide : ErC50: > 500 mg/l

Exposure time: 72 h

Species: Pseudokirchneriella subcapitata (green algae)

Method: OECD Test Guideline 201

EbC50: 310 mg/l Exposure time: 72 h

Species: Pseudokirchneriella subcapitata (green algae)

Method: OECD Test Guideline 201

Toxicity to bacteria

Methyl Ethyl Sulfide : EC50: > 1,000 mg/l

Exposure time: 3 h Species: Bacteria Respiration inhibition

Method: OECD Test Guideline 209

Biodegradability

Methyl Ethyl Sulfide : aerobic

41 %

Testing period: 28 d

Method: OECD Test Guideline 301D

According to the results of tests of biodegradability this

product is not readily biodegradable.

: aerobic 92 %

Testing period: 31 d

Method: OECD Test Guideline 301D Expected to be inherently biodegradable.

Bioaccumulation

Methyl Ethyl Sulfide : This material is not expected to bioaccumulate.

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: Harmful to aquatic life with long lasting effects.

Mobility

Methyl Ethyl Sulfide : The product evaporates readily.

Additional ecological

information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

Methyl Ethyl Sulfide : Harmful to aquatic life.

Ethyl Chloride : Harmful to aquatic life.

Long-term (chronic) aquatic hazard

Methyl Ethyl Sulfide : Harmful to aquatic life with long lasting effects.

Ethyl Chloride : Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

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

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

Product : 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

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)

UN1993, FLAMMABLE LIQUIDS, N.O.S., (METHYL ETHYL SULFIDE), 3, II, RQ (ETHYL CHLORIDE)

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

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UN1993, FLAMMABLE LIQUID, N.O.S., (METHYL ETHYL SULFIDE), 3, II, (-15 °C c.c.)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN1993, FLAMMABLE LIQUID, N.O.S., (METHYL ETHYL SULFIDE), 3, II

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

UN1993, FLAMMABLE LIQUID, N.O.S., (METHYL ETHYL SULFIDE), 3, II, (D/E)

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

33,UN1993, FLAMMABLE LIQUID, N.O.S.., (METHYL ETHYL SULFIDE), 3, II

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

UN1993, FLAMMABLE LIQUID, N.O.S., (METHYL ETHYL SULFIDE), 3, II

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

Poisonous and Deleterious Substances Control Law

: Not applicable

Industrial Safety and Health Law

Substances Subject to be

: Not applicable

Notified Names

Enforcement Order of the

: Inflammable Substance

Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Enforcement Order of the Industrial Safety and Health

: Inflammable Substance

Law - Attached table 1 (Dangerous Substances)

Harmful Substances Required

: Not applicable

Permission for Manufacture

Hazardous Substances

: Not applicable

Subject to Labeling Requirements

Ordinance on Prevention of

: Not applicable

Organic Solvent Poisoning Ordinance on Prevention of

: Not applicable

Lead Poisoning

Harmful Substances

: Not applicable

Prohibited from Manufacture

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Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Ordinance on Prevention of Tetraalkyl Lead Poisoning

: Not applicable

: Not applicable

Not applicable

Not applicable

Substances Prevented From Impairment of Health

: Not applicable

Listed

Chemical Substance Control Law

: Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the **Environment and Promotion of Improvements to the Management Thereof**

: Not applicable

Other regulations

Fire Service Law : Flammable liquids

> Type 1 petroleums Hazardous rank II

High Pressure Gas Safety Act : Not applicable

Explosive Control Law : Not applicable

Vessel Safety Law : Flammable liquids (Article 2 and 3 of rules on shipping and

storage of dangerous goods and its Attached Table 1)

: Flammable liquid (Article 194 of The Enforcement Rules of **Aviation Law**

Aviation Law and its Attached Table 1)

Notification status

Europe REACH 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.

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 On the inventory, or in compliance with the inventory Australia AICS

New Zealand NZIoC Not in compliance with the inventory

On the inventory, or in compliance with the inventory Japan ENCS A substance(s) in this product was not registered, Korea KECI notified to be registered, or exempted from registration

by CPChem according to K-REACH regulations.

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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 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

Further information

Legacy SDS Number : 38710

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	LD50	Lethal Dose 50%			
	Government Industrial Hygienists					
AICS	Australia, Inventory of Chemical	LOAEL	Lowest Observed Adverse Effect			
	Substances		Level			
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency			
NDSL	Canada, Non-Domestic	NIOSH	National Institute for Occupational			
	Substances List		Safety & Health			
CNS	Central Nervous System	NTP	National Toxicology Program			
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of			
			Chemicals			
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect			
			Level			
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration			
EGEST	EOSCA Generic Exposure	OSHA	Occupational Safety & Health			
	Scenario Tool		Administration			
EOSCA	European Oilfield Specialty	PEL	Permissible Exposure Limit			
	Chemicals Association		·			
EINECS	European Inventory of Existing	PICCS	Philippines Inventory of			
	Chemical Substances		Commercial Chemical Substances			
MAK	Germany Maximum Concentration	PRNT	Presumed Not Toxic			
	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	TLV	Threshold Limit Value			
	on Cancer					
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average			
	Substances in China					
ENCS	Japan, Inventory of Existing and	TSCA	Toxic Substance Control Act			

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	New Chemical Substances		
KECI	Korea, Existing Chemical	UVCB	Unknown or Variable Composition,
	Inventory		Complex Reaction Products, and
			Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials
			Information System
LC50	Lethal Concentration 50%		

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