

**Dipentene Dimercaptan**

Version 1.8

Revision Date 2018-05-31

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

Product Name : Dipentene Dimercaptan  
Material : 1102727, 1021580, 1021576, 1031449, 1021579, 1021578,  
1036183, 1021577

Use : Chemical intermediate

**Company** : Chevron Phillips Chemical Company LP  
Specialty Chemicals  
10001 Six Pines Drive  
The Woodlands, TX 77380

**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

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

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

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**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

**Classification**


: Eye irritation, Category 2B  
Skin sensitization, Category 1

**Labeling**

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Symbol(s) : 

Signal Word : Warning

Hazard Statements : H317: May cause an allergic skin reaction.  
H320: Causes eye irritation.

Precautionary Statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity:****IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**ACGIH**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**SECTION 3: Composition/information on ingredients**

Synonyms : 3-mercapto-beta-4-dimethyl cyclohexaneethanethiol  
DPDM

Molecular formula : C<sub>10</sub>H<sub>20</sub>S<sub>2</sub>

Component	CAS-No.	Weight %
Dipentene Dimercaptan	4802-20-4	80 - 100

**SECTION 4: First aid measures**

General advice : Move out of dangerous area. Show this material safety data

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- 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 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.

**SECTION 5: Firefighting measures**

- Flash point : 149 °C (300 °F)  
Method: Cleveland Open Cup
- Autoignition temperature : No data available
- Unsuitable extinguishing media : High volume water jet.
- 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 : Normal measures for preventive fire protection.
- Hazardous decomposition products : Carbon oxides. Sulfur oxides.

**SECTION 6: Accidental release measures**

- Personal precautions : Use personal protective equipment. Ensure adequate ventilation.
- 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 : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

**SECTION 7: Handling and storage****Handling**

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Advice on safe handling : Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

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

**Storage**

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

**SECTION 8: Exposure controls/personal protection****Engineering measures**

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 NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. 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. Air-Purifying Respirator for Dusts and Mists. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, 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 according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate:. Protective suit. Safety shoes.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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

Form	: Liquid
Physical state	: Liquid
Color	: Colorless to light yellow
Odor	: Mildly unpleasant

**Safety data**

Flash point	: 149 °C (300 °F) Method: Cleveland Open Cup
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Oxidizing properties	: no
Autoignition temperature	: No data available
Molecular formula	: C <sub>10</sub> H <sub>20</sub> S <sub>2</sub>
Molecular weight	: 204.42 g/mol
pH	: Not applicable
Pour point	: No data available
Boiling point/boiling range	: 166 °C (331 °F) at 20.00 MMHG
Vapor pressure	: < 0.10 MMHG at 37.8 °C (100.0 °F)
Relative density	: 1.021 at 20 °C (68 °F)
Water solubility	: Partly soluble
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 4.79 cSt at 40 °C (104 °F)
Relative vapor density	: Not applicable
Evaporation rate	: No data available
Percent volatile	: > 99 %

**SECTION 10: Stability and reactivity**

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

**Possibility of hazardous reactions**

Conditions to avoid : No data available.  
Hazardous decomposition products : Carbon oxides  
Sulfur oxides

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

**SECTION 11: Toxicological information****Acute oral toxicity**

Dipentene Dimercaptan : LD50: 2,060 mg/kg  
Species: Mouse

**Eye irritation**

Dipentene Dimercaptan : Mild eye irritation

**Sensitization**

Dipentene Dimercaptan : The product is a skin sensitizer, sub-category 1B.  
Information given is based on data obtained from similar substances.

**Dipentene Dimercaptan  
Aspiration toxicity**

: May be harmful if swallowed and enters airways.

**Dipentene Dimercaptan  
Further information**

: Solvents may degrease the skin.

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

Dipentene Dimercaptan : LC50: 0.099 mg/l  
Exposure time: 96 h  
Species: Fish  
Method: QSAR modeled data

**Toxicity to daphnia and other aquatic invertebrates**

Dipentene Dimercaptan : EC50: 0.074 mg/l  
Exposure time: 48 h  
Species: Daphnia  
Method: QSAR modeled data

**Toxicity to algae**

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Dipentene Dimercaptan : EC50: 0.064 mg/l  
 Exposure time: 72 h  
 Species: algae  
 Method: QSAR modeled data

**M-Factor**

beta,4-dimethyl-3-mercaptocyclohexaneethylthiol	:	M-Factor (Acute Aquat. Tox.)	10
	:	M-Factor (Chron. Aquat. Tox.)	10

**Biodegradability**

Dipentene Dimercaptan : This material is not expected to be readily biodegradable. Information given is based on data obtained from similar substances.

**Ecotoxicology Assessment**

Acute aquatic toxicity  
 Dipentene Dimercaptan : Very toxic to aquatic life.

Chronic aquatic toxicity  
 Dipentene Dimercaptan : Very toxic to aquatic life with long lasting effects.

Additional ecological information : Very toxic 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 : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

**SECTION 14: Transport information**

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

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

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bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**

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

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DIPENTENE DIMERCAPTAN), 9, III, (149 °C), MARINE POLLUTANT

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

UN3334, AVIATION REGULATED LIQUID, N.O.S., (DIPENTENE DIMERCAPTAN), 9, III

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

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DIPENTENE DIMERCAPTAN), 9, III

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

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DIPENTENE DIMERCAPTAN), 9, III

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

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (DIPENTENE DIMERCAPTAN), 9, III

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information****National legislation****SARA 311/312 Hazards**: Serious eye damage or eye irritation  
Respiratory or skin sensitizationCERCLA Reportable  
Quantity

: This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable  
Quantity

: This material does not contain any components with a SARA 302 RQ.



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- SARA 302 Threshold Planning Quantity : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.
- SARA 313 Ingredients : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

- Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

**US State Regulations**

- Pennsylvania Right To Know : No components are subject to the Pennsylvania Right to Know Act.
- New Jersey Right To Know : No components are subject to the New Jersey Right to Know Act.
- California Prop. 65 Ingredients : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

- Europe REACH : Not in compliance with the inventory
- United States of America (USA) : On the inventory, or in compliance with the inventory

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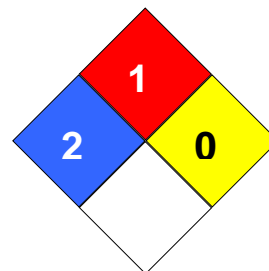
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TSCA	:	On the inventory, or in compliance with the inventory
Canada DSL	:	On the inventory, or in compliance with the inventory
Australia AICS	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	Not in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

**SECTION 16: Other information**

**NFPA Classification** : Health Hazard: 2  
Fire Hazard: 1  
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 43760

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%
AICS	Australia, Inventory of Chemical Substances	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

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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%		