

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Bayou Gas Odorants
300B Williams Lake Road
Pineville, Louisiana 71360

Customer Service Telephone Number: (318) 767-0820
(Monday through Friday, 8:00AM to 5:00PM CST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: DIMETHYL SULFIDE
Synonyms: DMS
Molecular formula: C₂H₆S
Chemical family: sulfides
Molecular weight: 62.13 g/mol
Product use: process chemical

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: transparent
Physical state: liquid
Odor: garlic-like

***Classification of the substance or mixture:**

Flammable liquid., Category 2, H225
Eye irritation, Category 2A, H319

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

GHS-Labeling

Hazard pictograms:



Signal word: **Danger**

Hazard statements:

H225 : Highly flammable liquid and vapour.

H319 : Causes serious eye irritation.

Supplemental Hazard Statements:

May displace oxygen and cause rapid suffocation.

The gas deadens the sense of smell. Do not depend on odor to detect presence of gas.

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.

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

Response:

P303 + P361 + P353 : IF ON SKIN (or hair): Remove/ 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 for extinction.

Storage:

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

Disposal:

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

Supplemental information:

Potential Health Effects:

The gas deadens the sense of smell. Do not depend on odor to detect presence of gas. (strong garlic-like odor)

Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing.

May cause: headache, nausea, suffocation, death, (severity of effects depends on extent of exposure).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Methane, thiobis-	75-18-3	99 %	H225, H319
Methanethiol	74-93-1	<= 0.2 %	H220, H280, H331, H400, H410

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

4. FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

4.3. Indication of immediate medical attention and special treatment needed, if necessary:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

5. FIREFIGHTING MEASURES

Extinguishing media (suitable):

Dry chemical, water spray, carbon dioxide, foam

Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).



SAFETY DATA SHEET

DIMETHYL SULFIDE

Further firefighting advice:

Cool closed containers exposed to fire with water spray.

Closed containers of this material may explode when subjected to heat from surrounding fire.

Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, and other flames and ignition sources at locations distant from material handling point.

After a fire, wait until the material has cooled to room temperature before initiating clean-up activities.

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

When burned, the following hazardous products of combustion can occur:

Carbon oxides

sulfur oxides

hydrogen sulfide

Hazardous organic compounds

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:

Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel.

Ventilate the area. Eliminate all ignition sources. Avoid generation of vapors. Contain and collect spillage with non-combustible absorbent material such as sodium bicarbonate, sodium carbonate, calcium carbonate, clean sand or non-acidic clay and then wet down (dampen) the mixture with water. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. The sweepings should be wetted down further with water. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:

Appropriate personal protective equipment is set forth in Section 8.

7. HANDLING AND STORAGE

Handling

General information on handling:

Avoid breathing vapor or mist.

Avoid contact with eyes.

Keep away from heat, sparks and flames.

No smoking.

Keep container closed.

Do not enter confined spaces unless adequately ventilated.

Use only with adequate ventilation.

Wash thoroughly after handling.

Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.

Container hazardous when empty.

Follow label warnings even after container is emptied.

RESIDUAL VAPORS MAY EXPLODE ON IGNITION.

DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.

Improper disposal or reuse of this container may be dangerous and/or illegal.

Emptied container retains vapor and product residue.



SAFETY DATA SHEET

DIMETHYL SULFIDE

Storage

General information on storage conditions:

Keep in a dry, cool place. Keep away from direct sunlight. Keep container closed when not in use. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity. Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All metal and groundable storage containers, including but not limited to drums, cylinders, Returnable Intermodal Bulk Containers (RIBCs) and Class C Flexible Intermodal Bulk Containers (FIBCs) must be bonded and grounded during filling and emptying operations. Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes which pertain to the specific local conditions of storage and use, including OSHA 29 CFR 1910.106 and NFPA 30, 70, 77, and 497.

Storage incompatibility – General:

Store away from oxidizers and reactive materials.

Store separate from:

Solid bleach

Acids

Alkali metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Methane, thiobis- (75-18-3)

US. ACGIH Threshold Limit Values

Time weighted average	10 ppm
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Methanethiol (74-93-1)

US. ACGIH Threshold Limit Values

Time weighted average	0.5 ppm
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US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Ceiling Limit Value	10 ppm (20 mg/m ³)
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Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at

sources of air contamination such as open process equipment.

Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

Respiratory protection:

Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components (full facepiece recommended). Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	transparent
Physical state:	liquid
Odor:	garlic-like
Odor threshold:	2.5 ppb
Flash point	< -22 °F (< -30 °C) (closed cup)(Method: A9 Method (D. 92/69/ECC))
Auto-ignition temperature:	401 °F (205 °C)
Lower flammable limit (LFL):	2.2 %(V)
Upper flammable limit (UFL):	19.7 %(V)
pH:	No data available
Density:	0.854 g/cm ³ (59.9 °F (15.5 °C))
Specific Gravity (Relative density):	0.854 (59.9 °F(15.5 °C))
Vapor pressure:	388.000 mmHg
Vapor density:	2.14 kg/m ³

Boiling point/boiling range:	97 - 102.7 °F (36 - 39.3 °C)
Melting point/range:	Not applicable
Freezing point:	-144 °F (-98 °C)
Evaporation rate:	No data available
Solubility in water:	slightly soluble
Solubility in other solvents: [qualitative and quantitative]	Soluble in: Alcohols Ethyl ether
Refractive index:	1.435 68 °F (20 °C)
Viscosity, dynamic:	0.28 mPa.s 68 °F (20 °C)
% Volatiles:	100 %
Molecular weight:	62.13 g/mol
Oil/water partition coefficient:	No data available
Thermal decomposition	No data available
Critical point:	Critical pressure: 40,128 mmHg Critical temperature: 444 °F (229 °C)
Henry's constant:	170E+00 Pa.m ³ /mol
Flammability:	See GHS Classification in Section 2

10. STABILITY AND REACTIVITY

Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions:

None known.

Materials to avoid:

Reactive materials
Oxidizers.
Alkali metals
Acids
Solid bleach

Conditions / hazards to avoid:

Contact with combustible materials may enhance the risk of fire. Alkali, acids, solid bleach (strong oxidizer) may cause violent reaction and fire.

Hazardous decomposition products:

Thermal decomposition giving toxic and corrosive products :

sulfur oxides
Carbon oxides
hydrogen sulfide
Hazardous organic compounds

11. TOXICOLOGICAL INFORMATION

Data on this material and/or a similar material are summarized below.

Data for Methane, thiobis- (75-18-3)

Acute toxicity

Oral:

Harmful if swallowed. (rat and mouse) LD50 = 535 - 3,700 mg/kg.

Dermal:

Practically nontoxic. (Rabbit) LD50 > 5,000 mg/kg.

Inhalation:

Practically nontoxic. (Rat) 4 h LC50 = 102.3 mg/l 40250 ppm. (vapor)

Skin Irritation:

Practically non-irritating. (Rabbit) Irritation Index: 0.4/8. (24 h)

Eye Irritation:

Causes serious eye irritation. (Rabbit)

Repeated dose toxicity

Subchronic oral administration to Rat / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro:

No genetic changes were observed in laboratory tests using: bacteria, animal cells

Genotoxicity

Assessment in Vivo:

No genetic changes were observed in laboratory tests using: mice

Developmental toxicity

Exposure during pregnancy. Oral (Rat) / No birth defects were observed.

Other information

Due to the viscosity, this substance may present an aspiration hazard.
Symptoms of aspiration may include increased breathing and heart rate, coughing and related signs of respiratory distress.

Human experience

Skin contact:

No skin allergy was observed. (repeated or prolonged exposure)

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

Data on this material and/or its components are summarized below.

Data for Methane, thiobis- (75-18-3)

Biodegradation:

Readily biodegradable. (28 d) biodegradation 67 - 77 %

Octanol Water Partition Coefficient:

log Pow = 0.84 (calculated)

Data for Methanethiol (74-93-1)

Biodegradation:

Readily biodegradable. (21 d) biodegradation 64 % / similar material

Octanol Water Partition Coefficient:

log Pow = 0.65 - 0.78

Photodegradation:

air reaction with OH radicals Half-life direct photolysis: = 5.8 h

Mobility and Distribution in the Environment:

Slight adsorption / Log Koc = 1.23

Ecotoxicology

Data on this material and/or its components are summarized below.

Data for Methane, thiobis- (75-18-3)

Aquatic toxicity data:

Practically nontoxic. *Oncorhynchus mykiss* (rainbow trout) 96 h LC50 = 213 mg/l

Aquatic invertebrates:

Harmful. *Daphnia magna* (Water flea) 48 h LC50 = 29 - 81 mg/l

Algae:

Practically nontoxic. *Pseudokirchneriella subcapitata* (green algae) 72 h EC50 > 113 mg/l

Data for Methanethiol (74-93-1)

Aquatic toxicity data:



SAFETY DATA SHEET
DIMETHYL SULFIDE

Toxic. Danio rerio (zebra fish) 96 h LC50 = 1.8 mg/l (as sodium salt)

Aquatic invertebrates:

Toxic. Daphnia magna (Water flea) 48 h EC50 = 1.32 - 2.46 mg/l (as sodium salt)

Algae:

Harmful. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 = 15 mg/l (as sodium salt)

Toxic. Pseudokirchneriella subcapitata (green algae) 72 h EbC50 = 6.3 mg/l (as sodium salt)

13. DISPOSAL CONSIDERATIONS

Waste disposal:

Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number : 1164
Proper shipping name : Dimethyl sulfide
Class : 3
Packaging group : II
Marine pollutant : no

International Maritime Dangerous Goods Code (IMDG)

UN Number : 1164
Proper shipping name : DIMETHYL SULPHIDE
Class : 3
Packaging group : II
Marine pollutant : no
Flash point : < -22 °F (< -30 °C) closed cup

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
United States TSCA Inventory	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL



SAFETY DATA SHEET
DIMETHYL SULFIDE

China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to
Australia Inventory of Chemical Substances (AICS)	AICS	Conforms to

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

<u>Chemical name</u>	<u>CAS-No.</u>	<u>SARA Reportable Quantities</u>	<u>SARA Threshold Planning Quantity</u>
Methanethiol	74-93-1	100 lbs	500 lbs

SARA Title III - Section 311/312 Hazard Categories:
 Acute Health Hazard, Fire Hazard

SARA Title III – Section 313 Toxic Chemicals:

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.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

<u>Chemical name</u>	<u>CAS-No.</u>	<u>Reportable quantity</u>
Methanethiol	74-93-1	100 lbs
Methane, thiobis-	75-18-3	100 lbs

United States – State Regulations

New Jersey Right to Know

<u>Chemical name</u>	<u>CAS-No.</u>
Methane, thiobis-	75-18-3

New Jersey Right to Know – Special Health Hazard Substance(s)

<u>Chemical name</u>	<u>CAS-No.</u>
Methane, thiobis-	75-18-3

Pennsylvania Right to Know

<u>Chemical name</u>	<u>CAS-No.</u>
Methane, thiobis-	75-18-3

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

<u>Chemical name</u>	<u>CAS-No.</u>
Methane, thiobis-	75-18-3

California Prop. 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

<u>Chemical name</u>	<u>CAS-No.</u>
Benzene	71-43-2

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Chemical name</u>	<u>CAS-No.</u>
Benzene	71-43-2

Carbon disulfide	75-15-0
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16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Miscellaneous:

Other information:	Refer to National Fire Protection Association (NFPA) Codes 30, 70, 77, and 497 and OSHA 29 CFR 1910.106, for safe handling.
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Latest Revision(s):

Revised Section(s):	Wave 2 Chapter 4 update
Reference number:	000000035659
Date of Revision:	07/19/2016



SAFETY DATA SHEET

DIMETHYL SULFIDE

Date Printed: 01/16/2019

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