

## Section 1: Product and Company Identification

**Absolute Accuracy**  
4591 S Wayside Dr  
Houston, TX 77087  
(832) 571-2387

Product Code: 2945  
Part Number: 2945

**Synonyms:**  
**Recommended Use:**  
**Usage Restrictions:**

## Section 2: Hazards Identification



**Danger**

### Hazard Classification:

Eye Effects (Category 2.A)  
Flammable (Category 1)  
Gases Under Pressure

### Hazard Statements:

Causes serious eye irritation  
Contains gas under pressure; may explode if heated  
Extremely flammable gas  
Toxic to aquatic life

### Precautionary Statements

#### Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wash thoroughly after handling.  
Wear eye protection/face protection.

#### Response:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Eliminate all ignition sources if safe to do so.  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

#### Storage:

Protect from sunlight.  
Store in well-ventilated place.

## Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Dimethyl Sulfide	75-18-3	5 ppm
Hydrogen Sulfide	7783-06-4	5 ppm
Methane	74-82-8	Balance

	Chemical Substance	Chemical Family	Trade Names
Dimethyl Sulfide	DIMETHYL SULFIDE	Sulfides	(CH <sub>3</sub> ) <sub>2</sub> S; (Methylsulfanyl)methane; 2-Thiopropene; Dimethyl monosulfide; Dimethyl sulphide; Dimethyl thiomethane; dimethylmonosulfide; dimethylmonosulphide
Hydrogen Sulfide	HYDROGEN SULFIDE	Inorganic gases	HYDROGEN SULFIDE (H <sub>2</sub> S); DIHYDROGEN MONOSULFIDE; DIHYDROGEN SULFIDE; HYDROSULFURIC ACID; SULFUR DIHYDRIDE; SULFURETED HYDROGEN; SULFUR HYDRIDE; STINK DAMP; SEWER GAS; RCRA U135; UN 1053; H <sub>2</sub> S
Methane	METHANE, COMPRESSED GAS	Hydrocarbons, Aliphatic, Saturated	FIRE DAMP; MARSH GAS; METHYL HYDRIDE; NATURAL GAS; METHANE; UN 1971; R50; CH <sub>4</sub>

## Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Dimethyl Sulfide	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).	Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.	Treat symptomatically and supportively.
Hydrogen Sulfide	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.	Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

	<b>Skin Contact</b>	<b>Eye Contact</b>	<b>Ingestion</b>	<b>Inhalation</b>	<b>Note to Physicians</b>
<b>Methane</b>	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

## Section 5: Fire Fighting Measures

	<b>Suitable Extinguishing Media</b>	<b>Products of Combustion</b>	<b>Protection of Firefighters</b>
<b>Dimethyl Sulfide</b>	Use foam, dry chemical, or carbon dioxide. Water may be ineffective. Do NOT use straight streams of water.	Sulfur oxides, hydrogen sulfide gas, carbon monoxide and carbon dioxide, mercaptans, methane and hydrogen sulfide	<ul style="list-style-type: none"> <li>▪ Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Use a chemical protective suit.</li> <li>▪ Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Use a chemical protective suit.</li> </ul>
<b>Hydrogen Sulfide</b>	Let burn unless leak can be stopped immediately. Large fires: Use regular foam or flood with fine water spray.	Sulfur oxides	<ul style="list-style-type: none"> <li>▪ Any self-contained breathing apparatus with a full facepiece.</li> <li>▪ Protective material types: butyl rubber, polyvinyl chloride (PVC), neoprene</li> </ul>
<b>Methane</b>	Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray.	Carbon monoxide, carbon dioxide, water	<ul style="list-style-type: none"> <li>▪ Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.</li> <li>▪ Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.</li> </ul>

## Section 6: Accidental Release Measures

	<b>Personal Precautions</b>	<b>Environmental Precautions</b>	<b>Methods for Containment</b>
<b>Dimethyl Sulfide</b>	Keep unnecessary people away, isolate hazard area and deny entry. Do not touch spilled material.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.
<b>Hydrogen Sulfide</b>	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. For tank, rail car or tank truck: 800 meters (1/2 mile). Do not touch spilled material.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Remove sources of ignition. Reduce vapors with water spray. Do not get water directly on material.
<b>Methane</b>	Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

	<b>Methods for Cleanup</b>	<b>Other Information</b>
<b>Dimethyl Sulfide</b>	Small spills: Absorb with sand or other noncombustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal.	None

	Methods for Cleanup	Other Information
Hydrogen Sulfide	Collect runoff for disposal as potential hazardous waste. Dike for later disposal. Absorb with sand or other non-combustible material. Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash).	Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).
Methane	Not available	Not available

## Section 7: Handling and Storage

	Handling	Storage
Dimethyl Sulfide	Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125F (52C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.	Do not get liquid in eyes, on skin, or clothing. Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Open valve slowly. Close cylinder valve after each use; keep closed even when empty. If valve is hard to open, discontinue use and contact your supplier.
Hydrogen Sulfide	Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Store in a cool, dry place. Store in a well-ventilated area. Avoid contact with light. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Notify State Emergency Response Commission for storage or use at amounts greater than or equal to the TPQ (U.S. EPA SARA Section 302). SARA Section 303 requires facilities storing a material with a TPQ to participate in local emergency response planning (U.S. EPA 40 CFR 355.30). Keep separated from incompatible substances.	Subject to handling regulations: U.S. OSHA 29 CFR 1910.119.
Methane	Store and handle in accordance with all current regulations and standards. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.

## Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
Dimethyl Sulfide	DIMETHYL SULFIDE: 10 ppm ACGIH TWA (cutaneous absorption danger)

	Exposure Guidelines
<b>Hydrogen Sulfide</b>	HYDROGEN SULFIDE: 20 ppm OSHA ceiling 50 ppm OSHA peak 10 minute(s) (once if no other measurable exposure occurs) 10 ppm (14 mg/m <sup>3</sup> ) OSHA TWA (vacated by 58 FR 35338, June 30, 1993) 15 ppm (21 mg/m <sup>3</sup> ) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 10 ppm ACGIH TWA 15 ppm ACGIH STEL 10 ppm (15 mg/m <sup>3</sup> ) NIOSH recommended ceiling 10 minute(s) TLV-TWA: 1ppm Upper respiratory irritation (ACGIH)
<b>Methane</b>	METHANE, COMPRESSED GAS: ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA METHANE: No occupational exposure limits established. ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA

### Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
<b>Dimethyl Sulfide</b>	Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing.	Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Use a chemical protective suit.
<b>Hydrogen Sulfide</b>	Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing.	Any self-contained breathing apparatus with a full facepiece.
<b>Methane</b>	Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.

### General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

	Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
<b>Dimethyl Sulfide</b>	Liquid	Clear	Colorless to yellow	N/A	Liquid	Irritating odor	N/A
<b>Hydrogen Sulfide</b>	Gas	Colorless	Colorless	N/A	Gas	Rotten egg odor	N/A
<b>Methane</b>	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
<b>Dimethyl Sulfide</b>	-48 deg C	IC		205 deg C (401 deg F)	19.7%	2.20%
<b>Hydrogen Sulfide</b>	Flammable	Not available	Not available	500 F (260 C)	45.5%	3.9%

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
<b>Methane</b>	-369 F (-223 C)	Not available	724.44 (log = 2.87) (estimated from water solubility)	999 F (537 C)	15%	5%

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
<b>Dimethyl Sulfide</b>	38 deg C @ 760 mm Hg	-98 deg C	502 mm Hg @ 25 deg C	2.14 (air=1)	0.840 g/ml	Insoluble	Not available	2.5 ppb	Not available	0.28 cP @ 20 C
<b>Hydrogen Sulfide</b>	-78 to -77 F (-61 to -60.3 C)	-123 F (-86 C)	15200 mmHg @ 25 C	1.2 (Air=1)	1.192	2.58-2.9% @ 20 C	4.5-<7 (saturated solution)	0.13 ppm	Not applicable	0.0128 cP @ 25 C
<b>Methane</b>	-260 F (-162 C)	-297 F (-183 C)	760 mmHg @ -161 C	0.555 (Air=1)	Not applicable	3.5% @ 17 C	Not applicable	Not available	Not applicable	0.01118 cP @ 27 C

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
<b>Dimethyl Sulfide</b>	62.13	C2H6S	Not available	Not available	Not available	Not available	Not available
<b>Hydrogen Sulfide</b>	34.08	H2-S	1.539 g/L @ 0 C	Not available	Not available	Not applicable	Soluble: Carbon disulfide, alcohol, ether, glycerol, gasolines, kerosene, crude oil, alkali solutions
<b>Methane</b>	16.04	C-H4	0.717 g/L @ 0 C	Not available	Not applicable	Not applicable	Soluble: Alcohol, ether, benzene, organic solvents

## Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
<b>Dimethyl Sulfide</b>	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Oxidizing materials, bases, reducing materials
<b>Hydrogen Sulfide</b>	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Combustible materials, metals, oxidizing materials, halogens, metal oxides, metal salts, bases, rust, oxidants, oxygen, copper powder, acetaldehyde, silver fulminate
<b>Methane</b>	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Halogens, oxidizing materials, combustible materials

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
<b>Dimethyl Sulfide</b>	Oxides of carbon, oxides of sulfur	Will not polymerize.
<b>Hydrogen Sulfide</b>	Oxides of sulfur	Will not polymerize.
<b>Methane</b>	Oxides of carbon	Will not polymerize.

## Section 11: Toxicology Information

### Acute Effects

	Oral LD50	Dermal LD50	Inhalation
<b>Dimethyl Sulfide</b>	535-3,700 mg/kg (rat)	>5000 mg/kg (rat)	Causes respiratory tract irritation.

	Oral LD50	Dermal LD50	Inhalation
<b>Hydrogen Sulfide</b>	444 ppm inhalation-rat LC50	Irritation 0.000125 ppm/5 hour(s) eyes-human	Irritation, lack of sense of smell, sensitivity to light, nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, disorientation, tremors, visual disturbances, suffocation, lung congestion, internal bleeding, heart damage, nerve damage, brain damage, coma, death
<b>Methane</b>	Not available	Not available	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, fatigue, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma

	Eye Irritation	Skin Irritation	Sensitization
<b>Dimethyl Sulfide</b>	Irritation	Irritation	Eye irritation, Category 2; H319: Causes serious eye irritation.
<b>Hydrogen Sulfide</b>	Irritation, sensitivity to light, visual disturbances	Irritation liquid: frostbite	Acute toxicity, Category 2, inhalation; H330: Fatal if inhaled. Specific Target Organ Toxicity (single exposure), Category 3; H335: May cause respiratory irritation. Hazardous to the aquatic environment, Acute Category 1; H400: Very toxic to aquatic life
<b>Methane</b>	No information on significant adverse effects	No information on significant adverse effects	Difficulty breathing

### Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
<b>Dimethyl Sulfide</b>	Not listed by ACGIH, IARC, NTP, or CA Prop 65.	Not available	Not available	No data
<b>Hydrogen Sulfide</b>	Not available	Not available	Available.	No data
<b>Methane</b>	Not available	Not available	Not available	No data

## Section 12: Ecological Information

### Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
<b>Dimethyl Sulfide</b>	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Highly volatile from water.	Accumulates very little in the bodies of living organisms.	Leaches through the soil or the sediment at a moderate rate.
<b>Hydrogen Sulfide</b>	Fish toxicity: Acute LC50 7 ug/L Fresh water Fish - Fathead minnow - Pimephales promelas - FRY 96 hours; 14.9 ug/L 96 hour(s) LC50 (Mortality) Fathead minnow (Pimeph) Invertebrate toxicity: 9730 ug/L 1.5 hour(s) (Mortality) Mediterranean mussel (Mytilus galloprovincialis) Algal toxicity: Not available	Highly toxic to aquatic life.	Not available	Not available

	Phyto toxicity: Not available Other toxicity: Not available			
<b>Methane</b>	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Relatively non-persistent in the environment. Moderately volatile from water.	Accumulates very little in the bodies of living organisms.	Not expected to leach through the soil or the sediment.

## Section 13: Disposal Considerations

<b>Dimethyl Sulfide</b>	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
<b>Hydrogen Sulfide</b>	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U135.
<b>Methane</b>	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

#### DOT Information For This Mixture

<b>Shipping Name</b>	Compressed gas, flammable, n.o.s. (Methane, Dimethyl Sulfide)
<b>UN Number</b>	UN1954
<b>Hazard Class</b>	2.1
<b>Hazard Information</b>	FLAMMABLE GAS

#### Individual Component Information

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
<b>Dimethyl Sulfide</b>	Dimethyl Sulfide	UN1164	3	II	3	N/A	N/A	N/A



	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
<b>H y d r o g e n S u l f i d e</b>	Hydrogen sulfide	UN1053	2.3	Not applicable	2.3; 2.1	Forbidden	Forbidden	Toxic-Inhalation Hazard Zone B
<b>M e t h a n e</b>	Methane, compressed	UN1971	2.1	Not applicable	2.1	Forbidden	150 kg	N/A

### Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
<b>D i m e t h y l S u l f i d e</b>	Dimethyl Sulfide	UN1164	3	II
<b>H y d r o g e n S u l f i d e</b>	HYDROGEN SULFIDE; or HYDROGEN SULPHIDE	UN1053	2.3; 2.1	Not applicable
<b>M e t h a n e</b>	Methane, compressed	UN1971	2.1	Not applicable

## Section 15: Regulatory Information

### U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
<b>D i m e t h y l S u l f i d e</b>	Not regulated.	Not regulated.	Not regulated.
<b>H y d r o g e n S u l f i d e</b>	100 LBS RQ	500 LBS TPQ	100 LBS RQ
<b>M e t h a n e</b>	Not regulated.	Not regulated.	Not regulated.

### SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
<b>D i m e t h y l S u l f i d e</b>	Yes	No	Yes	No	No
<b>H y d r o g e n S u l f i d e</b>	Yes	No	Yes	No	Yes
<b>M e t h a n e</b>	Yes	No	Yes	No	Yes

### SARA 372.65

<b>Dimethyl Sulfide</b>	Not regulated.
<b>Hydrogen Sulfide</b>	HYDROGEN SULFIDE: Administrative stay issued Aug. 22, 1994
<b>Methane</b>	Not regulated.

### OSHA Process Safety

<b>Dimethyl Sulfide</b>	Not regulated.
<b>Hydrogen Sulfide</b>	1500 LBS TQ
<b>Methane</b>	Not regulated.

### State Regulations

	<b>CA Proposition 65</b>
<b>Dimethyl Sulfide</b>	Not regulated.
<b>Hydrogen Sulfide</b>	Not regulated.
<b>Methane</b>	Not regulated.

### Canadian Regulations

	<b>WHMIS Classification</b>
<b>Dimethyl Sulfide</b>	B2, D2B
<b>Hydrogen Sulfide</b>	A, B1, D1A, D2B.
<b>Methane</b>	A, B1

### National Inventory Status

	<b>US Inventory (TSCA)</b>	<b>TSCA 12b Export Notification</b>	<b>Canada Inventory (DSL/NDSL)</b>
<b>Dimethyl Sulfide</b>	Listed on inventory.	Not listed.	Listed on DSL.
<b>Hydrogen Sulfide</b>	Listed on inventory.	Not listed.	Listed on inventory.
<b>Methane</b>	Listed on inventory.	Not listed.	Listed on inventory.

## Section 16: Other Information

	<b>NFPA Rating</b>
<b>Dimethyl Sulfide</b>	HEALTH=2 FIRE=3 REACTIVITY=0
<b>Hydrogen Sulfide</b>	HEALTH=4 FIRE=4 REACTIVITY=0
<b>Methane</b>	HEALTH=0 FIRE=4 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard