

Section 1: Product and Company Identification

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

Product Code: 3013

Synonyms:
Recommended Use:
Usage Restrictions:

Section 2: Hazards Identification



Danger

Hazard Classification:

Flammable (Category 1)
Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated
Extremely flammable gas
Toxic to aquatic life
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response:

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
Tert-Butyl Mercaptan	75-66-1	2.5 %
Methane	74-82-8	BALANCE

	Chemical Substance	Chemical Family	Trade Names
Tert-Butyl Mercaptan	2-Methyl 2-Propanethiol	Thiols	2-methyl-2-propanethiol; tert-butanethiol; tert-butythiol; 1,1-dimethylethanethiol; 2-isobutanethiol; 2-propanethiol, 2 methyl-
Methane	METHANE, COMPRESSED GAS	Hydrocarbons, Aliphatic, Saturated	FIRE DAMP; MARSH GAS; METHYL HYDRIDE; NATURAL GAS; METHANE; UN 1971; R50; CH4

Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Tert-Butyl Mercaptan	Remove contaminated clothing. Wash with soap and lots of water. Get medical attention, if needed.	Flush with large amounts of water or saline. Get medical attention.	Never make unconscious person vomit or drink fluids. Give sodium bicarbonate solution. When vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention immediately.	Remove to fresh air. Use a bag valve mask or similar device to perform artificial respiration if needed.	For ingestion, consider gastric lavage.
Methane	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

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Tert-Butyl Mercaptan	Regular dry chemical, carbon dioxide, water, regular foam, alcohol resistant foam. Large fires: use regular foam or flood with fine water spray.	Not available	<ul style="list-style-type: none"> ▪ Not available ▪ Keep unnecessary people away, isolate hazard area and deny entry. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Stay upwind and keep out of low areas. ▪ Not available ▪ Not available
Methane	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"> ▪ Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece. ▪ Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.

Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
Tert-Butyl Mercaptan	Avoid heat, flames, sparks, and other sources of ignition.	Small: Collect spilled material in appropriate container for disposal. large: dike for later disposal.	Small: Collect spilled material in appropriate container for disposal. large: dike for later disposal.
Methane	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.

	Methods for Cleanup	Other Information
Tert-Butyl Mercaptan	Stop leak if possible without personal risk. Reduce vapors with water spray. For small spills, absorb with sand or other non-combustible material.	Not available
Methane	Not available	Not available

Section 7: Handling and Storage

	Handling	Storage
Tert-Butyl Mercaptan	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.
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
Tert-Butyl Mercaptan	No occupational exposure limits established.
Methane	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
Tert-Butyl Mercaptan	Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing	Not available
Methane	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
Tert-Butyl Mercaptan	Liquid	Colorless	Colorless		Liquid	Skunk-like odor	Not available
Methane	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Tert-Butyl Mercaptan	< -20 deg F	IB	Not available	Not available	Not available	Not available
Methane	-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
Tert-Butyl Mercaptan	147 F	34 F	181 mm Hg at 25 deg C	3.1 (Air=1)	.8002	Slightly soluble	Not available	Not available	Not available	Not available
Methane	-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
Tert-Butyl Mercaptan	90.18	(CH ₃) ₃ CSH ₃ CSH	Not available	Not available	Not available	Not available	Soluble: alcohol, ether, liquid hydrogen sulfide
Methane	16.04	C-H ₄	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
Tert-Butyl Mercaptan	Stable at normal temperatures and pressure	Stable at normal temperatures and pressure	Acids, oxidizing materials
Methane	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Halogens, oxidizing materials, combustible materials

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Tert-Butyl Mercaptan	Thermal decomposition products: hydrogen sulfide, oxides of sulfur, carbon	Will not polymerize
Methane	Oxides of carbon	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Tert-Butyl Mercaptan	4729 mg/kg oral-rat	Not available	Irritation, lack of sense of smell, nausea, vomiting, diarrhea, difficult breathing, headache, symptoms of drunkenness, bluish skin color, lung congestion, kidney damage, convulsions, coma
Methane	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
Tert-Butyl Mercaptan	Not available	Irritation	Skin sensitisation, Category 1; H317: May cause an allergic skin reaction.
Methane	No information on significant adverse effects	No information on significant adverse effects	Difficulty breathing

Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Tert-Butyl Mercaptan	Not available	Not Available	Not Available	No data
Methane	Not available	Not available	Not available	No data

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Tert-Butyl Mercaptan	Fish toxicity: not available Invertebrate toxicity: not available Algal toxicity: not available Phyto toxicity: not available Other toxicity: not available	Not available	Not available	Not available
Methane	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

Tert-Butyl Mercaptan	Subject to disposal regulations :U.S. EPA 40 CFR 262. Hazardous Waste Number: D001. Dispose in accordance with all current regulations.
Methane	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

Shipping Name	Compressed gas, flammable, n.o.s. (Methane, Tert-Butyl Mercaptan)
UN Number	UN1954
Hazard Class	2.1
Hazard Information	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
Tert-Butyl Mercaptan	Butyl mercaptans	UN2347	3	II	Flammable liquid	Not available	Not available	Not available
Methane	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
Tert-Butyl Mercaptan	Butyl Mercaptans	UN23347	3	II
Methane	Methane, compressed	UN1971	2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Tert-Butyl Mercaptan	Not available	Not available	Not available
Methane	Not regulated.	Not regulated.	Not regulated.

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Tert-Butyl Merc	No	No	Yes	No	Not available

aptan					
Methane	Yes	No	Yes	No	Yes

SARA 372.65

Tert-Butyl Mercaptan	Not available
Methane	Not regulated.

OSHA Process Safety

Tert-Butyl Mercaptan	No
Methane	Not regulated.

State Regulations

	CA Proposition 65
Tert-Butyl Mercaptan	Not listed
Methane	Not regulated.

Canadian Regulations

	WHMIS Classification
Tert-Butyl Mercaptan	Not available
Methane	A, B1

National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Tert-Butyl Mercaptan	Listed on inventory	Not listed	Not available
Methane	Listed on inventory.	Not listed.	Listed on inventory.

Section 16: Other Information

	NFPA Rating
Tert-Butyl Mercaptan	HEALTH: 0, FIRE: 3, REACTIVITY:0
Methane	HEALTH=0 FIRE=4 REACTIVITY=0

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