



MATERIAL SAFETY DATA SHEET

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Issue Date:

1- Chemical Product Information and Company Identification.

Product Name: : Tert-Butyl methyl ether for GC-HS, ChromSolv[®].
Synonym: : Methyl tert-Butyl Ether.
Product code: : BS14382.
CAS Number: : 1634-04-4.
Company Name: : Briti Scientific.
Company Address: : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055.
Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
1634-04-4.	Methyl tert-Butyl Ether.	C ₅ H ₁₂ O.

Section 3- Hazards Identification.

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids: Category 2

Skin Corrosion/Irritation: Category 2

Specific target organ toxicity (single exposure): Category 3

Target Organs - Lungs.

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapour.

Causes skin irritation.

May cause respiratory irritation.



USA: #1004, Boston, Massachusetts, 02116, United States. India: Jeedimetla, Hyderabad-500 055, Telangana.

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Precautionary Statements

Prevention

- Wash face, hands and any exposed skin thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use only outdoors or in a well-ventilated area.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Keep cool.
- Avoid breathing dust/fume/gas/mist/vapors/spray.

Response

Get medical attention/advice if you feel unwell.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

If skin irritation occurs: Get medical advice/attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention.

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

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

Hazards not otherwise classified (HNOC)

Other hazards

Aspiration hazard if swallowed - can enter lungs and cause damage. Contains a known or suspected endocrine disruptor.

Section 4- First Aid Measures.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention if symptoms occur.





Skin Contact: Wash off immediately with plenty of water for at least 15 minutes.

Get medical attention if symptoms occur.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion: Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects: Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Notes to Physician: Treat symptomatically.

Section 5- Fire Fighting Measures.

Suitable Extinguishing Media: Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist maybe used to cool closed containers.

Unsuitable Extinguishing Media: No information available.

Flash Point -28°C / -18.4°F.

Method - No information available.

Autoignition Temperature 224°C / 435.2°F.

Explosion Limits

Upper 15.1 vol %

Lower 1.6 vol %

Sensitivity to Mechanical Impact: No information available.

Sensitivity to Static Discharge: No information available.

Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products: Carbon monoxide (CO), Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2	3	0	N/A

Section 6- Accidental Release Measures.

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

Environmental Precautions: Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up: Soak up with inert absorbent material. . Keep in suitable, closed containers for disposal. remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.





Section 7- Handling and Storage.

Handling: Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Use only under a chemical fume hood. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage: Flammables area. Keep away from heat, sparks and flame. Keep container tightly closed in a dry and well-ventilated place. May form explosive peroxides on prolonged storage. Incompatible Materials. Strong oxidizing agents.

Section 8- Exposure Control/Personal Protection.

Exposure Guidelines:

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Methyl tert-butyl ether	TWA: 50 ppm	-	-	TWA: 50 ppm

Engineering Measures: Ensure that eyewash stations and safety showers are close to the work station location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protective Equipment

Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection: No protective equipment is needed under normal use conditions

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice

Section 9- Physical and Chemical Properties.

Appearance:	Colorless clear liquid.
Odor:	Petroleum distillates.
Odor Threshold:	No information available.
pH:	No information available.
Melting Point/Range:	-108°C.
Boiling Point/Range:	55°C.
Flash Point:	-28°C / -18.4°F.
Evaporation Rate:	No information available.
Flammability (solid,gas):	Not applicable.





Flammability or explosive limits:

Upper	15.1 vol %
Lower	1.6 vol %
Vapor Pressure:	No information available.
Density:	0.74 g/cm ³ .
Solubility:	Soluble in water.
Partition coefficient; n-octanol/water:	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Molecular:	C ₅ H ₁₂ O.
Molecular Weight:	88.15 g/mol.

Section 10- Stability and Reactivity.

Reactive Hazard: None known, based on information available

Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible products. Keep away from open flames, hot surfaces and sources of ignition

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂).

Hazardous Polymerization: Hazardous polymerization does not occur.

Hazardous Reactions: None under normal processing.

Section 11- Toxicological Information.

Acute Toxicity

Product Information: No acute toxicity information is available for this product.

Component Information

Component: Methyl tert-butyl ether.

LD50 Oral: LD50 = 2963 mg/kg (Rat).

LD50 Dermal: LD50 = 10000 mg/kg (Rabbit).

LC50 Inhalation: LC50 = 85 mg/L (Rat) 4h.

Toxicologically Synergistic Products: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: Irritating to eyes and skin.

Sensitization: No information available.

Mutagenic Effects: Mutagenic effects have occurred in experimental animals.

Reproductive Effects: No information available.

Developmental Effects: No information available.

Teratogenicity: No information available.





STOT - single exposure: Lungs

STOT - repeated exposure: None known.

Aspiration hazard: No information available

Symptoms / effects, both acute and delayed: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Endocrine Disruptor Information: EU - Endocrine Disrupters Candidate List- Group III Chemical

Other Adverse Effects: Tumorigenic effects have been reported in experimental animals.

Section 12- Ecological Information.

Ecotoxicity: Do not empty into drains.

Persistence and Degradability: Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation: No information available.

Mobility: Will likely be mobile in the environment due to its volatility.

Section 13- Disposal Considerations.

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14- Transport Information.

DOT

UN-No: UN2398

Proper Shipping Name: METHYL tert-BUTYL ETHER

Hazard Class: 3

Packing Group: II

TDG

UN-No: UN2398

Proper Shipping Name: METHYL tert-BUTYL ETHER

Hazard Class: 3

Packing Group: II

IATA

UN-No: UN2398

Proper Shipping Name: METHYL tert-BUTYL ETHER

Hazard Class: 3

Packing Group: II

IMDG/IMO

UN-No: UN2398

Proper Shipping Name: METHYL tert-BUTYL ETHER

Hazard Class: 3

Packing Group: II





Section 15- Regulatory Information.

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

U.S. Federal Regulations

SARA 313: Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act): Not applicable

Clean Air Act: Not applicable

OSHA - Occupational Safety and

Health Administration: Not applicable

CERCLA: Not applicable.

California Proposition 65: This product does not contain any Proposition 65 chemicals.

Section 16- Other Information.

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

