

TERT-BUTYL METHYL ETHER FOR PESTICIDE RESIDUE ANALYSIS MSDS

CAS No: 1634-04-4 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Substance
Trade name : tert-BUTYL METHYL ETHER For pesticide residue analysis
EC index no : 603-181-00-X
EC no : 216-653-1
CAS No : 1634-04-4
Product code : 2386K
Formula : C₅H₁₂O

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H225
Category 2
Skin corrosion/irritation, H315
Category 2

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11
Xi; R38

Full text of R-phrases: see section 16

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour
H315 - Causes skin irritation

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : tert-BUTYL METHYL ETHER For pesticide residue analysis
CAS No : 1634-04-4
EC no : 216-653-1
EC index no : 603-181-00-X

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get medical advice/attention.

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : Causes skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Keep away from sources of ignition - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid contact with skin and eyes. Do not breathe vapours.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear colourless.
Odour	: characteristic ethereal odor.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -110 °C
Freezing point	: No data available
Boiling point	: 55 - 56 °C
Flash point	: -33 °C
Auto-ignition temperature	: 374 K
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Highly flammable liquid and vapour
Vapour pressure	: 279.2 hPa at 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.74 g/cm ³
Relative gas density	: 0.74 at 25°C
Solubility	: Water: Insoluble in water
Log Pow	: 1.77

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.016 - 0.151 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

tert-BUTYL METHYL ETHER For pesticide residue analysis (1634-04-4)

Log Pow	1.77
---------	------

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 2398
UN-No. (IMDG)	: 2398
UN-No.(IATA)	: 2398
UN-No.(ADN)	: 2398
UN-No. (RID)	: 2398

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: METHYL TERT-BUTYL ETHER
Proper Shipping Name (IMDG)	: METHYL tert-BUTYL ETHER
Proper Shipping Name (IATA)	: METHYL TERT-BUTYL ETHER
Proper Shipping Name (ADN)	: METHYL tert-BUTYL ETHER
Proper Shipping Name (RID)	: METHYL tert-BUTYL ETHER
Transport document description (ADR)	: UN 2398 METHYL TERT-BUTYL ETHER, 3, II, (D/E)
Transport document description (IMDG)	: UN 2398 METHYL tert-BUTYL ETHER, 3, II (< -18°C c.c.)
Transport document description (IATA)	: UN 2398 METHYL TERT-BUTYL ETHER, 3, II

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

Transport document description (ADN) : UN 2398 METHYL tert-BUTYL ETHER, 3, II
Transport document description (RID) : UN 2398 METHYL tert-BUTYL ETHER, 3, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



ADN

Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3



RID

Transport hazard class(es) (RID) : 3
Danger labels (RID) : 3



14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 1L
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •3YE

- Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : E
Flash point (IMDG) : below -18°C c.c.
MFAG-No : 127

- Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

ERG code (IATA) : 3L

- Inland waterway transport

Classification code (ADN) : F1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T7
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

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

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

tert-BUTYL METHYL ETHER For pesticide residue analysis is not on the REACH Candidate List

tert-BUTYL METHYL ETHER For pesticide residue analysis is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 1200)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

tert-BUTYL METHYL ETHER For pesticide residue analysis

Safety Data Sheet

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H225	Highly flammable liquid and vapour
H315	Causes skin irritation
R11	Highly flammable
R38	Irritating to skin
F	Highly flammable
Xi	Irritant

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product