

TOLUENE FOR PESTICIDE RESIDUE TRACE ANALYSIS MSDS

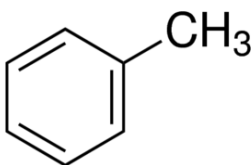
CAS-No.: 108-88-3 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Substance
:
EC Index-No. : 601-021-00-3
EC-No. : 203-625-9
CAS-No. : 108-88-3
Product code : 0327B
Formula : C₇H₈ - (C(CH₃)CHCHCHCHCH)Chemical structure :



Synonyms : Methylbenzene

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
Reproductive toxicity, H361d
Category 2
Specific target organ toxicity — Single H336

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exposure, Category 3,
Narcosis
Specific target organ toxicity — Repeated exposure, Category 2
Aspiration hazard, Category 1

H373
H304

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.3; R63

F; R11

Xn; R65

Xn; R48/20

Xi; R38

R67

Full text of R-phrases: see section 16

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

GHS08

Signal word (CLP) : Danger

Hazard statements (CLP) :

- H225 - Highly flammable liquid and vapour.
 - H304 - May be fatal if swallowed and enters airways.
 - H315 - Causes skin irritation.
 - H336 - May cause drowsiness or dizziness.
 - H361d - Suspected of damaging the unborn child.
 - H373 - May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements (CLP) :
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P260 - Do not breathe vapours, dust, fume, gas.
 - P280 - Wear protective gloves, protective clothing, eye protection, face protection.
 - P301+P310 - IF SWALLOWED: Immediately call a doctor.
 - P331 - Do NOT induce vomiting.

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

| | |
|--------------|------------------------------------------------|
| Name | : TOLUENE For pesticide residue trace analysis |
| CAS-No. | : 108-88-3 |
| EC-No. | : 203-625-9 |
| EC Index-No. | : 601-021-00-3 |

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. |
| First-aid measures after skin contact | : Wash with plenty of 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 | : Immediately call a POISON CENTER/doctor. Rinse mouth. |

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

| | |
|-------------------------------------|------------------------------------------------------------------------|
| Symptoms/effects | : Causes damage to organs. |
| Symptoms/effects after inhalation | : May cause respiratory irritation. May cause drowsiness or dizziness. |
| Symptoms/effects after skin contact | : Causes skin irritation. |
| Symptoms/effects after ingestion | : May be fatal if swallowed and enters airways. |

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|----------------------------------------------------|
| Suitable extinguishing media | : Carbon dioxide. Dry powder. Foam. Water spray. |
| Unsuitable extinguishing media | : Do not use extinguishing media containing water. |

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 open flames. No smoking. |
|------------------|-----------------------------------------------------------------------------------------------------------|

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

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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 : On land, sweep or shovel into suitable containers. Collect spillage.

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. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. 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.
Storage conditions : Keep in fireproof place. Keep container tightly closed.
Incompatible materials : Heat sources.

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 appropriate mask

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Molecular mass : 92.14 g/mol
Colour : Clear Colorless.

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| | |
|--------------------------------------------|----------------------------------------------------|
| Odour | : aromatic benzene-like. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : 2.24 |
| Melting point | : -93 °C |
| Freezing point | : No data available |
| Boiling point | : 110 - 111 °C |
| Flash point | : 4 °C |
| Auto-ignition temperature | : 535 K |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Flammable Highly flammable liquid and vapour. |
| Vapour pressure | : 22 at 20°C |
| Relative vapour density at 20 °C | : 3.14 |
| Relative density | : No data available |
| Density | : 0.86 g/cm ³ |
| Solubility | : Water: 0.05 g/100ml @ 20°C (gm/100gm water) |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 0.012 - 0.07 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

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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 : Suspected of damaging the unborn child.

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product/Packaging disposal recommendations | : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| Additional information | : Handle empty containers with care because residual vapours are flammable. |
| Ecology - waste materials | : Hazardous waste due to toxicity. |

SECTION 14: Transport information

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

14.1. UN number

| | |
|---------------|--------|
| UN-No. (ADR) | : 1294 |
| UN-No. (IMDG) | : 1294 |
| UN-No. (IATA) | : 1294 |
| UN-No. (ADN) | : 1294 |
| UN-No. (RID) | : 1294 |

14.2. UN proper shipping name

| | |
|---------------------------------------|-------------------------------------|
| Proper Shipping Name (ADR) | : TOLUENE |
| Proper Shipping Name (IMDG) | : TOLUENE |
| Proper Shipping Name (IATA) | : Toluene |
| Proper Shipping Name (ADN) | : TOLUENE |
| Proper Shipping Name (RID) | : TOLUENE |
| Transport document description (ADR) | : UN 1294 TOLUENE, 3, II, (D/E) |
| Transport document description (IMDG) | : UN 1294 TOLUENE, 3, II (7°C c.c.) |
| Transport document description (IATA) | : UN 1294 Toluene, 3, II |
| Transport document description (ADN) | : UN 1294 TOLUENE, 3, II |
| Transport document description (RID) | : UN 1294 TOLUENE, 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 |
|-----------------------------------|-----|

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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

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) : 1I

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T4

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : LGBF

Vehicle for tank carriage : FL

Transport category (ADR) : 2

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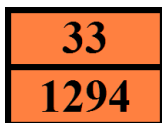
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Special provisions for carriage - Operation : S2, S20
(ADR)

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) : T4

Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D

Stowage category (IMDG) : B

Flash point (IMDG) : 7°C c.c.

Properties and observations (IMDG) : Colourless liquid with a benzene-like odour. Flashpoint: 7°C c.c. Explosive limits: 1.27% to 7% Immiscible with water.

MFAG-No : 130

- 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

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) : T4

Portable tank and bulk container special provisions (RID) : TP1

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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

TOLUENE For pesticide residue trace analysis is not on the REACH Candidate List

TOLUENE For pesticide residue trace analysis is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : TOLUENE For pesticide residue trace analysis is listed

Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

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15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

| | |
|---------------|--------------------------------------------------------------------------------------|
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT RE 2 | Specific target organ toxicity — Repeated exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Narcosis |
| H225 | Highly flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| R11 | Highly flammable |
| R38 | Irritating to skin |
| R48/20 | Harmful: danger of serious damage to health by prolonged exposure through inhalation |
| R63 | Possible risk of harm to the unborn child |
| R65 | Harmful: may cause lung damage if swallowed |
| R67 | Vapours may cause drowsiness and dizziness |
| F | Highly flammable |
| Xi | Irritant |
| Xn | Harmful |

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