

**TETRAMETHYL AMMONIUM HYDROXIDE
0.1N SOLUTION AR IN
ISOPROPANE/METHANOL MSDS**

CAS No: MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Mixture
:
Product code : 06224

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 Directive 67/548/EEC or 1999/45/EC

T; R23/24/25
T; R39/23/24/25

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

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

Hazard symbols :



T - Toxic

R-phrases : R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed
R39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed

S-phrases : S4 - Keep away from living quarters
S24 - Avoid contact with skin
S28 - After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer)
S35 - This material and its container must be disposed of in a safe way
S36/37 - Wear suitable protective clothing and gloves
S38 - In case of insufficient ventilation, wear suitable respiratory equipment
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S59 - Refer to manufacturer/supplier for information on recovery/recycling

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methanol	(CAS No) 67-56-1 (EC no) 200-659-6 (EC index no) 603-001-00-X	75 - 99	F; R11 T; R23/24/25 T; R39/23/24/25	Flam. Liq. 2, H225 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Oral), H301 STOT SE 1, H370
TETRAMETHYL AMMONIUM HYDROXIDE 25% IN METHANOL	(CAS No) 75-59-2	1 - 5	Not classified	Not classified

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

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Specific measures (see ... on this label). Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Rinse mouth. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician. Specific treatment (see ... on this label).

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

Symptoms/injuries	: Causes damage to organs.
Symptoms/injuries after inhalation	: Harmful if inhaled. May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Causes skin irritation. Toxic in contact with skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Toxic if swallowed.

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	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂).
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	: Heating may cause an explosion.

5.3. Advice for firefighters

Firefighting instructions	: Do not fight fire when fire reaches explosives.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Avoid breathing dust/fume/gas/mist/vapours/spray.
Emergency procedures	: Stop release.

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. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.
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6.4. Reference to other sections

No additional information available

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture.

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 : No data available
Odour threshold : 160 ppm
pH : 13
Relative evaporation rate (butylacetate=1) : No data available
Melting point : -97.8 °C
Freezing point : No data available
Boiling point : 100 °C
Flash point : 12 °C
Auto-ignition temperature : 463.89 °C
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable

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Vapour pressure	: 97.68 mm Hg (at 20°C)
Relative vapour density at 20 °C	: 1.11
Relative density	: No data available
Density	: 1.014 g/cm ³
Solubility	: Water: Soluble in 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	: 0.06 - 0.365 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

Highly flammable liquid and vapour. Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Irritation	: Not classified pH: 13
Corrosivity	: Not classified pH: 13
Sensitisation	: Not classified
Repeated dose toxicity	: Not classified

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Carcinogenicity	: Not classified
Mutagenicity	: Not classified
Toxicity for reproduction	: Not classified

Potential adverse human health effects and symptoms : Toxic if swallowed. Toxic in contact with skin.

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to ...
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)	: 1992
UN-No. (IMDG)	: 1992
UN-No.(IATA)	: 1992
UN-No.(ADN)	: 1992
UN-No. (RID)	: 1992

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.

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Proper Shipping Name (IMDG)	: FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (IATA)	: FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (ADN)	: FLAMMABLE LIQUID, TOXIC, N.O.S.
Proper Shipping Name (RID)	: FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport document description (ADR)	: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II, (D/E)
Transport document description (IMDG)	: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II
Transport document description (IATA)	: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II
Transport document description (ADN)	: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II
Transport document description (RID)	: UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 3 (6.1)
Danger labels (ADR)	: 3, 6.1



IMDG

Transport hazard class(es) (IMDG)	: 3 (6.1)
Danger labels (IMDG)	: 3, 6.1



IATA

Transport hazard class(es) (IATA)	: 3 (6.1)
Hazard labels (IATA)	: 3, 6.1



ADN

Transport hazard class(es) (ADN)	: 3 (6.1)
Danger labels (ADN)	: 3, 6.1



RID

Transport hazard class(es) (RID)	: 3 (6.1)
Danger labels (RID)	: 3, 6.1

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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)	: FT1
Special provision (ADR)	: 274
Limited quantities (ADR)	: 1L
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S2, S22
Hazard identification number (Kemler No.)	: 336
Orange plates	: 
Tunnel restriction code (ADR)	: D/E
EAC code	: •3WE
APP code	: A(fl)

- Transport by sea

Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02

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Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2, TP13
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
MFAG-No	: 131

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3
ERG code (IATA)	: 3HP

- Inland waterway transport

Classification code (ADN)	: FT1
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, TOX, A
Ventilation (ADN)	: VE01, VE02
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: FT1
Special provision (RID)	: 274
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage – Loading and unloading (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 336

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

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to AwSV, Annex 1)

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

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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin

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H331	Toxic if inhaled
H370	Causes damage to organs
R11	Highly flammable
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
F	Highly flammable
T	Toxic

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