



## MATERIAL SAFETY DATA SHEET

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Tetramethylammonium chloride, 98+%

### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**MSDS Name:** Tetramethylammonium chloride, 98+%

**Catalog Numbers:**

T072

**Synonyms:**

N,N,N-Tetramethylmethanaminium chloride

**Company Identification:**

LEONID CHEMICALS

62/A-2 2nd Stage, Industrial Suburb

Yeshwanthpur, Bangalore -22, INDIA

Ph- +91-80-23378354

### SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	: 75-57-0
Chemical Name	: Tetramethylammonium chloride
%	: 98+%
EINECS#	: 200-880-8
Hazard Symbols	: T
Risk Phrases	: 25 36/37/38

### SECTION 3 - HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Toxic if swallowed. Irritating to eyes, respiratory system and skin. Hygroscopic (absorbs moisture from the air).

#### Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation.

Ingestion:

Poison by ingestion. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation:

May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

Chronic:

Prolonged or repeated eye contact may cause conjunctivitis.



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## SECTION 4 - FIRST AID MEASURES

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### Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

### Skin:

Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

### Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

### Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

### Notes to Physician:

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## SECTION 5 - FIRE FIGHTING MEASURES

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### General Information:

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

### Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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General Information: Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

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## SECTION 7 - HANDLING and STORAGE

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### Handling:

Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

### Storage:

Store in a cool, dry place. Store in a tightly closed container.

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## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

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### Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.  
Personal Protective Equipment

**Eyes:**

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:**

Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Physical State: Crystalline powder

Color: white - ivory

Odor: amine-like

pH: Not available.

Vapor Pressure: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 420 deg C

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: >300 deg C

Solubility in water: in water: >60% (20 c)

Specific Gravity/Density:

Molecular Formula: (CH<sub>3</sub>)<sub>4</sub>NCl

Molecular Weight: 109.60

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## SECTION 10 - STABILITY AND REACTIVITY

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**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, exposure to moist air or water.

**Incompatibilities with Other Materials:**

Strong oxidizing agents, bases.

**Hazardous Decomposition Products:**

Hydrogen chloride, carbon monoxide, oxides of nitrogen, carbon dioxide.

Hazardous Polymerization: Will not occur.

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#### SECTION 11 - TOXICOLOGICAL INFORMATION

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RTECS#:

CAS# 75-57-0: BS7700000

LD50/LC50:

CAS# 75-57-0: Oral, rat: LD50 = 50 mg/kg.

Not available.

Carcinogenicity:

Tetramethylammonium chloride -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

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#### SECTION 12 - ECOLOGICAL INFORMATION

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#### SECTION 13 - DISPOSAL CONSIDERATIONS

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Dispose of in a manner consistent with federal, state, and local regulations.

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#### SECTION 14 - TRANSPORT INFORMATION

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IATA

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.\*

Hazard Class: 6.1

UN Number: 2811

Packing Group: III

IMO

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: 2811

Packing Group: III

RID/ADR

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: 2811

Packing group: III

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#### SECTION 15 - REGULATORY INFORMATION

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European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 25 Toxic if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

S 37/39 Wear suitable gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 75-57-0: 2

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 75-57-0 is listed on Canada's DSL List.

CAS# 75-57-0 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

US FEDERAL

TSCA

CAS# 75-57-0 is listed on the TSCA inventory.

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## SECTION 16 - ADDITIONAL INFORMATION

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MSDS Creation Date: 7/16/1996 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.