



## MATERIAL SAFETY DATA SHEET

CHLOROACETALDEHYDE DIMETHYL ACETAL

### SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:

Chloroacetaldehyde Dimethyl Acetal, 97%

Catalog Numbers:

AC108500000, AC108500010, AC108500050, AC108501000, AC108502500, AC108505000  
Ac108505000

Synonyms:

2-Chloro-1,1-Dimethoxyethane; CADMA; Dimethylchloroacetal

Company Information:

LEONID CHEMICALS

62/A-2 1st Stage, Yeshwanthpur Industrial Suburb

Ashokpuram School Road

Bangalore-560 022, Karnataka, INDIA

Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

### SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	97-97-2
Chemical Name	:	Chloroacetaldehyde Dimethyl Acetal
%	:	97 %
EINECS#	:	202-624-0
Hazard Symbols	:	Un Listed
Risk Phrases	:	Un Listed

### SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:

clear, colorless liquid. Flash Point: 28 deg C.

Warning! Flammable liquid and vapor. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Light sensitive. Air sensitive. The toxicological properties of this material have not been fully investigated.

Target Organs:

Respiratory system, eyes, skin.

Potential Health Effects

Eye:

May cause eye irritation. The toxicological properties of this material have not been fully investigated

Skin:

May cause skin irritation. The toxicological properties of this material have not been fully

investigated.

Ingestion:

May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation:

May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Vapors may cause dizziness or suffocation.

Chronic:

No information found.

---

#### SECTION 4- FIRST AID MEASURES

---

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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse

Ingestion:

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

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.

Notes to Physician:

Treat symptomatically and supportively

---

#### SECTION 5- FIRE FIGHTING MEASURES

---

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Flash Point:

28 deg C ( 82.40 deg F)

Autoignition Temperature:

360 deg C ( 680.00 deg F)

Explosion Limits, Lower:

Not available.

Upper:

Not available.

NFPA Rating:

(estimated) Health: 1; Flammability: 3; Instability: 0

---

## SECTION 6- ACCIDENTAL RELEASE MEASURES

---

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Place under an inert atmosphere. A vapor suppressing foam may be used to reduce vapors.

---

## SECTION 7 - HANDLING and STORAGE

---

### Handling:

Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Store protected from light. Handle under an inert atmosphere. Store protected from air. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

### Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not expose to air. Store protected from light. Store under an inert atmosphere.

---

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

---

### Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits :

Chemical Name	:	Chloroacetaldehyde Dimethyl Acetal
ACGIH	:	none listed
NIOSH	:	none listed
OSHA - Final PELs	:	none listed

### OSHA Vacated PELs:

Chloroacetaldehyde Dimethyl Acetal: No OSHA Vacated PELs are listed for this chemical.

### 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:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

---

#### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

---

Physical State	:	Liquid
Appearance	:	clear, colorless
Odor	:	None reported.
pH	:	Not available.
Vapor Pressure	:	<15 mbar @ 20 C
Vapor Density	:	4.3
Evaporation Rate	:	Not available.
Viscosity	:	Not available.
Boiling Point	:	128-130 deg C @ 760.00mmHg
Freezing/Melting Point	:	-73 deg C
Decomposition Temperature	:	Not available.
Solubility	:	52 g/l (20 c)
Specific Gravity/Density	:	1.0940g/cm <sup>3</sup>
Molecular Formula	:	C <sub>4</sub> H <sub>9</sub> ClO <sub>2</sub>
Molecular Weight	:	124.57

---

#### SECTION 10 - STABILITY AND REACTIVITY

---

Chemical Stability:

Stable under normal temperatures and pressures

Conditions to Avoid:

Incompatible materials, light, ignition sources, exposure to air, excess heat, strong oxidants.

Incompatibilities with Other Materials:

Oxidizing agents.

Hazardous Decomposition Products:

Hydrogen chloride, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Polymerization:

Has not been reported.

---

#### SECTION 11 - TOXICOLOGICAL INFORMATION

---

RTECS#:

CAS# 97-97-2 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 97-97-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information available

Teratogenicity:

No information available

Reproductive Effects:  
No information available

Mutagenicity:  
No information available

Neurotoxicity:  
No information available

Other Studies:  
Un Listed

---

## SECTION 12 - ECOLOGICAL INFORMATION

---

No information available.

---

## SECTION 13 - DISPOSAL CONSIDERATIONS

---

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

-  
RCRAP-Series : None listed.  
RCRA U-Series : None listed.

---

## SECTION 14 - TRANSPORT INFORMATION

---

### US DOT

Shipping Name : ETHERS, N.O.S.  
Hazard Class : 3  
UN Number : Un3271  
Packing Group : III

### Canada TDG

Shipping Name : FLAMMABLE LIQUID NOS (CHLOROACETALDEHYDE  
DIMETACETAL)  
Hazard Class : 3  
UN Number : Un1993  
Packing Group : III

---

## SECTION 15 - REGULATORY INFORMATION

---

### US FEDERAL

#### TSCA

CAS# 97-97-2 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

#### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 97-97-2 can be found on the following state right to know lists: Pennsylvania, Massachusetts.

#### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

#### European/International Regulations

European Labeling in Accordance with EC Directives

#### Hazard Symbols

XN

#### Risk Phrases:

R 10 Flammable.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

#### Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

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

S 33 Take precautionary measures against static discharges.

S 37 Wear suitable gloves.

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

S 9 Keep container in a well-ventilated place.

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

WGK (Water Danger/Protection)  
CAS# 97-97-2: No information available.

Canada - DSL/NDSL  
CAS# 97-97-2 is listed on Canada's DSL List

Canada - WHMIS  
This product has a WHMIS classification of B2.  
Canadian Ingredient Disclosure List

---

SECTION 16 - ADDITIONAL INFORMATION

---

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 event shall Fisher 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 Fisher has been advised of the possibility of such damages.