OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

DIETHYL CARBONATE 99%
(For Synthesis)
MSDS CAS: 105-58-8

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: DIETHYL CARBONATE
CAS#: 105-58-8
Synonym: DEC; Ethyl Carbonate; Ethoxyformic anhydride
Chemical Name: Carbonic Acid, Diethyl Ester
Chemical Formula: $C_5H_{10}O_3$

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet :

Company identification: **OXFORD LAB FINE CHEM LLP**
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
Navghar, Vasai (East). Palghar - 401 210.
Mumbai, Maharashtra, INDIA.
Tel: 91-250-2390989
Tel/Fax: 91-250-2390032

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS NO.	% by Weight
Diethyl Carbonate	105-58-8	100

Toxicological Data on Ingredients: Diethyl Carbonate LD50: Not available. LC50: Not available.

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Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator), of ingestion.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

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Section 4: First Aid Measures (Continued)

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: **Not available.**

Section 5: Fire and Explosion Data

Flammability of the Product: **Flammable.**

Auto-Ignition Temperature: **445°C (833°F)**

Flash Points: **CLOSED CUP: 25°C (77°F).**

Flammable Limits: **Not available.**

Products of Combustion: **These products are carbon oxides (CO, CO2).**

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosion.

Special Remarks on Fire Hazards: **May form explosive mixtures with air.**

Special Remarks on Explosion Hazards: **Vapors may form explosive mixtures with air.**

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Section 6: Accidental Release Measures

Small Spill:
Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe gas/ fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

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Section 8: Exposure Controls/Personal Protection (Continued)

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not Available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor	: Pleasant ethereal. Mild
Taste	: Not available.
Molecular Weight	: 118.14 g/mole
Color	: Colorless. Clear
pH (1% soln/water)	: Not available.
Boiling Point	: 126°C (258.8°F)
Melting Point	: -43°C (-45.4°F)
Critical Temperature	: Not available.
Specific Gravity	: 0.9752 (Water = 1)
Vapor Pressure	: 1.4 kPa (@ 25°C)
Vapor Density	: 4.07 (Air = 1)
Volatility	: Not available.
Odor Threshold	: Not available.
Water/Oil Dist. Coeff.	: Not available.
Ionicity (in Water)	: Not available.
Dispersion Properties	: See solubility in water, diethyl ether.
Solubility	: Soluble in diethyl ether. Insoluble in cold water, hot water.

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Section 10: Stability and Reactivity Data

Stability: **The product is stable.**

Instability Temperature: **4.07°C (39.3°F)**

Conditions of Instability:
Heat, ignition sources, incompatible materials, water/moisture.

Incompatibility with various substances:
Reactive with oxidizing agents, reducing agents, acids, alkalis. Slightly reactive to reactive with moisture.

Corrosivity: **Not available.**

Special Remarks on Reactivity: **Not available.**

Special Remarks on Corrosivity: **Not available.**

Polymerization: **Will not occur.**

Section 11: Toxicological Information

Routes of Entry:
Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: **LD50: Not available. LC50: Not available.**

Chronic Effects on Humans: **Not available.**

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator), of ingestion.

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose/Conc: LDL [Rat] - Route - Oral; Dose: 15000 mg/kg

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Section 11: Toxicological Information (Continued)

Special Remarks on Chronic Effects on Humans:
May cause birth defects (teratogenic) based on animal test data. May cause cancer based on animal test data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: Causes respiratory tract irritation. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, and diarrhea. The toxicological properties of this substance have not been fully investigated.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:
The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not Available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

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Section 14: Transport Information

Land transport (ADR-RID)

Proper shipping name: DIETHYL CARBONATE
UN N°: 2366
H.I. nr: 30
ADR - Class: 3
Labelling - Transport: 3 : Flammable liquid.
ADR - Group: III

Sea transport (IMDG) [English only]

Proper shipping name: DIETHYL CARBONATE
UN N°: 2366
IMO-IMDG - Class or division: 3 : Flammable liquid.
IMO-IMDG - Packing group: III

Air transport (ICAO-IATA) [English only]

Proper shipping name: DIETHYL CARBONATE
UN N°: 2366
IATA - Class or division: 3 : Flammable liquid.
IATA - Packing group: III

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Diethyl Carbonate Massachusetts RTK: Diethyl Carbonate Massachusetts spill list: Diethyl Carbonate New Jersey: Diethyl Carbonate TSCA 8(b) inventory: Diethyl Carbonate

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

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Section 15: Other Regulatory Information (Continued)

Other Classifications:

WHMIS (Canada): **CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS B-6: Reactive and very flammable material.**

DSCL (EEC): **R10- Flammable. R36/37/38- Irritating to eyes, respiratory system and skin. S16- Keep away from sources of ignition – No smoking. S24/25- Avoid contact with skin and eyes. S33- Take precautionary measures against static discharges. S36/37/39-Wear suitable protective clothing, gloves and eye/face protection.**

HMIS (U.S.A.):

Health Hazard: 2
Fire Hazard: 3
Reactivity: 0
Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1
Flammability: 3
Reactivity: 1
Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16 - Additional Information

References: **Not available.**

Other Special Considerations: **Not available.**

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