



MATERIAL SAFETY DATA SHEET

DI-TERT-BUTYL DICARBONATE,

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:
DI-TERT-BUTYL DICARBONATE, 97%

Catalog Numbers:
18977-0000, 18977-0050, 18977-1000, 18977-5000

Synonyms:
Di-tert-butyl pyrocarbonate BOC anhydride

Company Information:
LEONID CHEMICALS
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
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SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	24424-99-5
Chemical Name	:	Di-tert-butyl dicarbonate
%	:	97 %
EINECS#	:	246-240-1
Hazard Symbols	:	T+
Risk Phrases	:	10 26 36/37/38 43

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable. Very toxic by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Potential Health Effects

Eye:
Causes eye irritation.

Skin:
May cause skin irritation. May be harmful if absorbed through the skin. May cause sensitization by skin contact.

Ingestion:
May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation:
May be fatal if inhaled. Causes respiratory tract irritation.

Chronic:
Not available.

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.

Ingestion:
Get medical aid. Wash mouth out with water.

Inhalation:
Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:
Treat symptomatically and supportively.

SECTION 5- FIRE FIGHTING MEASURES

General Information:
Containers can build up pressure if exposed to heat and/or fire. 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. Containers may explode in the heat of a fire. Flammable solid.

Extinguishing Media:
Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide. Water may be ineffective.

SECTION 6- ACCIDENTAL RELEASE MEASURES

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

Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal container. Remove all sources of ignition. Use a spark-proof tool.

SECTION 7 - HANDLING and STORAGE

Handling:
Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage:
Keep away from sources of ignition. Store in a tightly closed container. Store in a dry area. Refrigerator/flammables.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Personal Protective Equipment

Eyes:

Wear chemical goggles.

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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Solid
Color	:	white
Odor	:	characteristic odor
pH	:	Not available.
Vapor Pressure	:	1.33 hPa @70 deg C
Viscosity	:	Not available.
Boiling Point	:	56 - 57 deg C @ 0.50 mmHg
Freezing/Melting Point	:	22-24 deg C
Autoignition Temperature	:	460 deg C (860.00 deg F)
Flash Point	:	37 deg C (98.60 deg F)
Explosion Limits, lower	:	Not available.
Explosion Limits, upper	:	Not available.
Decomposition Temperature	:	Un Listed
Solubility in water	:	insoluble
Specific Gravity/Density	:	1.02g/cm ³
Molecular Formula	:	C ₁₀ H ₁₈ O ₅
Molecular Weight	:	218.25

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, light, ignition sources, exposure to moist air or water.

Incompatibilities with Other Materials:

Oxidizing agents, reducing agents, acids, bases.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, n-butanol, isobutylene.

Polymerization:

Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:
CAS# 24424-99-5: Ht0230000

LD50/LC50:
CAS# 24424-99-5: Inhalation, rat: LC50 = 100 mg/m³/4H.
Oral, rat: LD50 > 5000 mg/kg
Skin, rabbit: LD50 = 2000 mg/kg

Carcinogenicity:
Di-tert-butyl dicarbonate -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

Other:
Avoid entering into waters or underground water. Do not empty into drains.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

SECTION 14 - TRANSPORT INFORMATION

IATA

Shipping Name : TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
Hazard Class : 6.1
UN Number : 2930
Packing Group : I

IMO

Shipping Name : TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
Hazard Class : 6.1
UN Number : 2930
Packing Group : I

RID/ADR

Shipping Name : TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
Hazard Class : 6.1
UN Number : 2930
Packing Group : I

SECTION 15 - REGULATORY INFORMATION

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols:
T+

Risk Phrases:

R 10 Flammable.
R 26 Very toxic by inhalation.
R 36/37/38 Irritating to eyes, respiratory system and skin.

R 43 May cause sensitization by skin contact.

Safety Phrases:

S 16 Keep away from sources of ignition No smoking.

S 24 Avoid contact with skin.

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# 24424-99-5: No information available.

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 24424-99-5 is listed on Canada's DSL List.

CAS# 24424-99-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits:

Un Listed

US FEDERAL

TSCA

CAS# 24424-99-5 is listed on the TSCA inventory.

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.