


SAFETY DATA SHEET

DI-TERT-DIBUTYL CARBONATE

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

1.1 Product identifier:	
CAS Number:	24424-99-5
EC number:	246-204-1
1.2 SYNONYMS:	<ul style="list-style-type: none"> • Di-tert-butyl pyrocarbonate • Boc anhydride

SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
2.2 Label elements:	Labelling according to Regulation (EC) No 1272/2008 Flammable liquids, (Category 3) Acute toxicity, inhalation (Category 1) Skin irritation, (Category 2) Serious eye damage, (Category 1) Skin sensitization, (Category 1) Specific target organ toxicity - single exposure, Respiratory system (Category 3)
Hazard Pictograms:	
Signal Word:	Danger
Hazard statements:	H226: Flammable liquid and vapor. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H330: Fatal if inhaled. H335: May cause respiratory irritation.

Precautionary Statements:	<p>P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P233: Keep container tightly closed.</p> <p>P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.</p> <p>P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.</p> <p>P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P405: Store locked up.</p> <p>P501: Dispose of contents/ container to an approved waste disposal plant.</p>
2.3 Other hazards:	
Inhalation:	can cause respiratory irritation, coughing, and difficulty breathing due to its corrosive and sensitizing properties.
Ingestion:	can cause severe irritation and burns to the mouth, throat, and digestive tract, potentially leading to nausea, vomiting, and abdominal pain.
Skin Contact:	can cause irritation, redness, and chemical burns due to its corrosive nature.
Eye contact:	can cause severe irritation, redness, pain, and possible chemical burns, potentially leading to serious eye damage.

Chronic Exposure:	may lead to persistent respiratory issues, skin sensitization, and prolonged irritation of the eyes and mucous membranes.
Aggravation of pre-existing conditions:	may aggravate pre-existing respiratory conditions such as asthma or chronic bronchitis, as well as skin disorders like eczema.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation:	Substances
CAS No:	Description: 24424-99-5 DI-TERT-DIBUTYL CARBONATE
Identification number(s):	EC number: 246-240-1

SECTION 4: First aid measures

4.1 Description of first aid measures	
General information:	
After inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact:	Wash off with polyethylene glycol and afterwards with plenty of water. Remove contaminated clothing immediately. Wash with plenty of water. Consult a physician.
After eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician.
After swallowing:	Rinse mouth with water. Immediately after ingestion. If conscious, make victim drink two glasses at most immediately. Never

	give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed:	Most important symptoms and effects include acute respiratory irritation, coughing, difficulty breathing, skin and eye irritation or burns, and gastrointestinal discomfort if ingested; delayed effects may involve persistent respiratory sensitivity, skin sensitization, and potential chemical burns or tissue damage.
4.3 Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media:	Carbon dioxide dry powder, Alcohol-resistant foam.
5.2 Special hazards arising from the substance or mixture:	Carbon oxides.
5.3 Advice for firefighters:	Wear fully protective suit, safety glasses and respiratory device. Cool tanks/drums with water spray/remove them into safety.
5.4 further information:	no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations.
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	Avoid dust accumulation. Seek medical attention.
6.2 Environmental precautions:	Do not enter this chemical into drains.
6.3 Methods and material for containment and cleaning up:	Take up spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:	For use in are with adequate ventilation. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material Do not use in confined spaces. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation.
7.2 Conditions for safe storage, including any incompatibilities:	Store in original containers. Keep containers securely sealed Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. Storage stability: Recommended storage temperature 2 - 8 °C Avoid heating above 40°C

	Store under inert gas. Moisture sensitive. Handle and open container with care.
Requirements to be met by storerooms and receptacles:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
7.3 Specific end uses:	no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	
Additional information about design of technical facilities:	A system of local and general exhaust is recommended.
8.2 Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
General protective and hygienic measures:	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	Respiratory protection: Required.
Protection of hands:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws. Wash and dry hands.
	Eye protection: Required

Protection of Body:	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.
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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Appearance: Form:	Crystalline solid (colourless liquid above 23°C)
Colour:	Colorless to pale yellow; solid appears white
Odour:	Mild
pH-value:	no data available
Melting point/Melting range:	23°C
Boiling point/Boiling range:	56°C
Flammability (solid, gaseous):	Flammable liquid
Ignition temperature:	460°C
Decomposition temperature:	Not determined
Self-igniting:	No data available
Flash point:	37°C
Danger of explosion:	No data available
Explosion limits: Lower:	No data available
Explosion limits: Upper:	No data available
Vapour pressure:	0.7 mmHg at 25 °C
Density at 20 °C:	0.95 g/cm ³
Relative density:	0.95
Vapour density:	No data available
Evaporation rate:	No data available
Solubility in / Miscibility with-water at 20 °C:	Insoluble
Partition coefficient:(n-octanol/water)	1.87
Viscosity:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity	Di-tert-dibutyl carbonate is reactive and may undergo exothermic reactions with nucleophiles, such as water, alcohols, and amines, releasing carbon dioxide and forming carbamates or related products.
10.2 Chemical stability	This chemical is stable under storage conditions. Slowly hydrolyzes in the presence of moisture to form tert-butyl alcohol and carbon dioxide.
10.3 Possibility of hazardous reactions	May react violently with strong acids, strong bases, and nucleophiles. Reacts with water to release CO ₂ , potentially leading to pressure buildup in closed systems. Contact with amines can produce heat and foaming due to rapid reaction.
10.4 Conditions to avoid	Heat, moisture, and open flames. Prolonged exposure to air or light can degrade the compound. Avoid storage in unventilated containers due to risk of pressure buildup.
10.5 Incompatible materials	Water and moisture, Amines, alcohols, acids, and bases, Oxidizing agents, Strong reducing agents.
10.6 Hazardous decomposition products	Carbon monoxide, carbon dioxide, Tert-butanol.

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute Toxicity:	LD50 (Oral, Rat): 5.000 mg/kg LD50 (Dermal, Rabbit): 2.000 mg/kg LC50 (Inhalation Rat): no data available
Skin corrosion/Irritation:	Causes skin irritation
Serious eye damage/irritation:	Causes serious eye damage
Respiratory damage/irritation:	No data available
Ingestion:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	No data available
Reproductive toxicity:	No data available
Specific target organ toxicity - single exposure:	Causes respiratory irritation
Specific target organ toxicity - repeated exposure:	No data available
Aspiration hazard:	No data available
Signs and Symptoms of Exposure:	Refer section 2.3
11.2 Additional toxicological information	
Biodegradability:	Readily biodegradable

SECTION 12: Ecological information

12.1 Toxicity Aquatic toxicity:	LC50(fish): No data available EC50(daphnia): No data available ErC50(algae): No data available
12.2 Persistence and degradability:	No data available
12.3 Bioaccumulative potential:	No data available
12.4 Mobility in soil:	No data available
12.5 Other adverse effects:	No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Uncleaned packaging Recommendation:	dispose of in accordance with local hazardous waste regulations
Recommended cleansing agents:	No data available

SECTION 14: Transport information

14.1 UN-Number · ADR, ADN, IMDG, IATA:	2929
14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:	Di-tert-dibutyl carbonate
14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :	6.1 (3)
14.4 Packing group · ADR, IMDG, IATA:	2
14.5 Environmental hazards:	None
14.6 Special precautions for user:	Handle responsibly.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU	Directive 2012/18/EU, under that this substance is classified in listed substances as acute toxic and flammable substances.
Named dangerous substances:	This substance is not listed in the annex 1 to the directive.
15.2 Chemical safety assessment:	Chemical assessment has not been carried out.

SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information.

However, due to the diversity of information sources and limitations of our knowledge, this document is only for reference. Users should make their independent judgment suitability of this information for their particular

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