

## 1: Identification of substance / mixture

### 1. Product Identifier

Substance

Product Name **Di-tert-butyl dicarbonate**  
Product Code IL-TBD  
CAS Number 24424-99-5  
Other Names BOC anhydride  
IUPAC  
MFCD Number MFCD00008805  
EC/EINECS 246-240-1  
REACH Number Index-No

### 2. Relevant identified uses of the substance or mixture and uses advised against

Research and Development

### 3. Details of the supplier of the safety data sheet

ISOMERLAB D.O.O.  
TRZASKA CESTA  
297A  
SI-1000 LJUBLJANA  
SLOVENIA



Telephone: +38640764332  
Email: INFO@ISOMERLAB.COM

### 4. Emergency telephone number

112

## 2. Hazards Identification

### 1. Classification of the substance or mixture

H228	Flam. Sol. 2	
H315	Skin Irrit. 2	
H317	Skin Sens. 1	
H318	Eye Dam. 1	
H330	Acute Tox. 2	
H335	STOT SE 3	

### 2. Label elements

Signal Word **Danger**



### Hazard Statements

H228	Flammable solid.
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 Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233	Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

### 3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

## 3. Composition / Information on Ingredients

### 1. Substances

Product Name	Hazards	Concentration
Di-tert-butyl dicarbonate		
CAS Number: 24424-99-5 EC/EINECS: 246-240-1	H228, H315, H317, H318, H330, H335 Acute Tox. 2, Eye Dam. 1, Flam. Sol. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3	<=100%

## 4. First Aid Measures

### 1. Description of first aid measures

<i>Skin Contact</i>	P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P332 + P313: If skin irritation occurs: Get medical advice/attention.
<i>Eye Contact</i>	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<i>Ingestion</i>	Consult a doctor. If conscious, give half a litre of water to drink immediately.
<i>Inhalation</i>	P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P340: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

### 2. Most important symptoms and effects

There may be irritation and redness.  
Severe burns may occur.

### 3. Indication of any immediate medical attention

No additional measures required

## 5. Firefighting measures

### 1. Extinguishing Media

*Suitable* Carbon dioxide.  
Alcohol or polymer foam.  
Dry chemical powder.  
Use water spray to cool containers.

*Unsuitable* no data

### 2. Special Hazards arising from the substance or mixture

Toxic.  
Corrosive.  
In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

### 3. Advice for Fire Fighters

Wear self-contained breathing apparatus.  
Wear protective clothing to prevent contact with skin and eyes.

## 6. Accidental Release Measures

### 1. Personal Precautions

Refer to section 8 of SDS for personal protection details.  
Do not attempt to take action without suitable protective clothing – see section 8 of SDS.

### 2. Environmental Precautions

Do not discharge into drains or rivers.

### 3. Methods & Materials

Mix with sand or vermiculite.  
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

## 4. Preventing the occurrence of secondary hazards.

No special measures required.

## 7. Handling and Storage

### 1. Personal Precautions

#### *Safe Handling*

Ensure there is sufficient ventilation of the area.  
Wash hands immediately after contamination.  
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. P240: Ground/bond container and receiving equipment.  
P264: Wash hands thoroughly after handling.

#### *Protection against explosions and fires*

P362: Take off contaminated clothing and wash before reuse.  
normal measures for preventive fire protection

### 2. Conditions for safe storage, including any incompatibilities

#### *Managing Storage Risks*

Store in cool, well ventilated area.  
Keep container tightly closed.  
Store cold 2-8° C.

#### *Storage Controls*

Avoid heating above: 40°C Handle and store under inert gas. Moisture sensitive. Handle and open container with care.  
Storage class (TRGS 510): Flammable liquids

#### *Maintaining Integrity*

P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
P233: Keep container tightly closed.  
Store away from oxidising agents

#### *Other advice*

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

### 3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

## 8. Exposure Controls/Personal Protection

### 1. Control Parameters

No Data Available

## 2. Exposure Controls

*General protective and hygiene measures*

P280: Wear protective gloves/protective clothing/eye protection/face protection.

*Engineering measures*

P271: Use only outdoors or in a well-ventilated area.

*Eye / Face Protection*

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

*Hand protection*

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 and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 120 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

*Respiratory protection*

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P284: Wear respiratory protection.

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

*Skin protection*

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

*Other personal protection advice*

no data

## 9. Physical and Chemical Properties

### 1. Physical and Chemical Properties

Appearance	Low melting solid
Odour	No Data Available
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	21-24°C
Initial boiling point and boiling range	56-57°C/0.5mm
Flash point	37°C
Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available
Upper/lower flammability or explosive limits	No Data Available
Vapour pressure	No Data Available
Vapour density	No Data Available
Relative density	0.950
Solubility(ies):	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

### 2. Other Information

No additional information available

## 10. Stability and Reactivity

### 1. Reactivity

no unusual reactivity

### 2. Stability

Stable under normal conditions.

### 3. Possibility of Hazardous Reactions

no hazardous reactions known

### 4. Conditions to Avoid

Heat.

### 5. Incompatible Materials

Water.  
Oxidising agents.  
Strong acids.  
Strong bases.

### 6. Hazardous Decomposition Products

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

## 11. Toxicology information

### 1. Information

<i>Acute Toxicity</i>	Oral LD50 (mam) >5000mg/kg Oral LD50 (rat) >5000mg/kg Dermal LD50 (mam/rat) >2000mg/kg Inhalative LC50/4H (rat) 100mg/m <sup>3</sup> /4H
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes
<i>Serious eye Damage/irritation</i>	strong irritant effect with danger of severe eye injury.
<i>Respiratory or skin sensitisation</i>	sensitization possible by skin contact
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	not known
<i>Reproductive toxicity</i>	With a NOAEL both for toxicity to reproduction and for developmental toxicity well above 400 mg/kg/day a classification is not required
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

### 2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

## 12. Ecological Information

### 1. Toxicity

not known

### 2. Persistence and degradability

not known

### 3. Bio-Accumulative Potential

not known

### 4. Mobility and Soil

not known

### 5. Results of PBT & vPvB assessment

the substance is not PBT / vPvB

### 6. Other adverse effects

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

## 13. Disposal Considerations

### 1. Waste Treatment Methods

*Disposal Operations*

*Disposal of Packaging* Disposal must be made according to official regulations.

## 14. Transport Information

### Air (ICAO)

1. **UN Number:** 2930
2. **Shipping Name:** Toxic solid, flammable, organic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class : 4.1



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

### Road (ADR)

1. **UN Number:** 2930
2. **Shipping Name:** TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S (Di-tert-butyl dicarbonate).
3. **Transport hazard class(es):** : 6 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

### Sea (IMDG)

1. **UN Number:** 2930
2. **Shipping Name:** Toxic solid, flammable, organic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class : 4.1



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**

**7. Transport in bulk:** IBCINS: IBC08  
IBCPPROV: B4, B21  
  
TANKPROV: TP33

## 15. Safety, health, environmental and national regulations

### 1. Safety, health, environmental and national regulations:

product is not subject to any additional regulations or provisions

### 2. Safety Assessment

No Chemical Safety Assessment

## 16. Other Information

### 1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)  
RID:Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association  
ICAO:International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the ICAO  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CAS:Chemical Abstracts Service

### 3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.