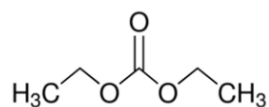


### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form : Substance  
:  
CAS-No. : 105-58-8  
Product code : 03323  
Chemical structure :



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

###### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only

###### 1.2.2. Uses advised against

No additional information available

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

SPAN LAB  
UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)  
401208 Mumbai - INDIA  
PH: +91 9820509929  
[info@spanlab.in](mailto:info@spanlab.in) [www.spanlab.in](http://www.spanlab.in)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H226  
Category 3  
Serious eye damage/eye H319  
irritation, Category 2  
Skin corrosion/irritation, H315  
Category 2  
Specific target organ H335  
toxicity — Single  
exposure, Category 3,  
Respiratory tract irritation

Full text of H statements : see section 16

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/37/38

R10

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H226 - Flammable liquid and vapour.  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P261 - Avoid breathing vapours, spray, dust, fume, gas.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : DIETHYL CARBONATE FOR SYNTHESIS

CAS-No. : 105-58-8

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

|                                       |  |
|---------------------------------------|--|
| First-aid measures after skin contact | : Wash with plenty of water/.... Wash contaminated clothing before reuse. Get medical advice/attention.  |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. |
| First-aid measures after ingestion    | : Rinse mouth. Do not induce vomiting.   |

### 4.2. Most important symptoms and effects, both acute and delayed

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Symptoms/effects after inhalation   | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Causes skin irritation.           |
| Symptoms/effects after eye contact  | : Causes serious eye irritation.    |

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Carbon dioxide. Dry powder. Foam. Water spray. |
| Unsuitable extinguishing media | : Do not use a heavy water stream.               |

### 5.2. Special hazards arising from the substance or mixture

|                  |  |
|------------------|--|
| Fire hazard      | : Flammable liquid and vapour.                     |
| Explosion hazard | : May form flammable/explosive vapour-air mixture. |

### 5.3. Advice for firefighters

|                                |   |
|--------------------------------|---|
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
|--------------------------------|---|

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

|                  |   |
|------------------|---|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. |
|------------------|---|

#### 6.1.1. For non-emergency personnel

|                      |                                   |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

#### 6.1.2. For emergency responders

|                      |  |
|----------------------|--|
| Protective equipment | : Use personal protective equipment as required. |
| Emergency procedures | : Ventilate area.                                |

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

|                         |  |
|-------------------------|--|
| Methods for cleaning up | : Collect spillage. On land, sweep or shovel into suitable containers. |
|-------------------------|--|

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

|                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Handle empty containers with care because residual vapours are flammable.   |
| Precautions for safe handling     | : Avoid contact with skin and eyes. Take precautionary measures against static discharge. Use only non-sparking tools. Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Do not breathe vapours. |
| Hygiene measures                  | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.   |

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

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

|                        |   |
|------------------------|---|
| Technical measures     | : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. |
| Storage conditions     | : Keep container tightly closed. Store in a well-ventilated place.  |
| Incompatible materials | : Heat sources.   |

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

|                          |  |
|--------------------------|--|
| Hand protection          | : Protective gloves  |
| Eye protection           | : Chemical goggles or safety glasses                               |
| Skin and body protection | : Wear suitable protective clothing                                |
| Respiratory protection   | : [In case of inadequate ventilation] wear respiratory protection. |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state                             | : Liquid                                    |
| Molecular mass                             | : 118.13 g/mol                              |
| Colour                                     | : Clear Colorless.                          |
| Odour                                      | : ethereal odour.                           |
| Odour threshold                            | : No data available                         |
| pH   | : No data available                         |
| Relative evaporation rate (butylacetate=1) | : No data available                         |
| Melting point                              | : -43 °C                                    |
| Freezing point                             | : No data available                         |
| Boiling point                              | : 126 °C                                    |
| Flash point                                | : 25 °C                                     |
| Auto-ignition temperature                  | : No data available                         |
| Decomposition temperature                  | : No data available                         |
| Flammability (solid, gas)                  | : Flammable<br>Flammable liquid and vapour. |
| Vapour pressure                            | : 1.4 kPa (at 25°C)                         |

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

|                                  |                             |
|----------------------------------|-----------------------------|
| Relative vapour density at 20 °C | : 4.07                      |
| Relative density                 | : No data available         |
| Density                          | : 0.9752 g/cm <sup>3</sup>  |
| Solubility                       | : Water: Insoluble in water |
| Log Pow                          | : No data available         |
| Viscosity, kinematic             | : No data available         |
| Viscosity, dynamic               | : No data available         |
| Explosive properties             | : No data available         |
| Oxidising properties             | : No data available         |
| Explosive limits                 | : No data available         |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Heat. Sparks.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Acute toxicity                    | : Not classified                    |
| Skin corrosion/irritation         | : Causes skin irritation.           |
| Serious eye damage/irritation     | : Causes serious eye irritation.    |
| Respiratory or skin sensitisation | : Not classified                    |
| Germ cell mutagenicity            | : Not classified                    |
| Carcinogenicity                   | : Not classified                    |
| Reproductive toxicity             | : Not classified                    |
| STOT-single exposure              | : May cause respiratory irritation. |

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 2366

UN-No. (IMDG) : 2366

UN-No. (IATA) : 2366

UN-No. (ADN) : 2366

UN-No. (RID) : 2366

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : DIETHYL CARBONATE

Proper Shipping Name (IMDG) : DIETHYL CARBONATE

Proper Shipping Name (IATA) : Diethyl carbonate

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

|                                       |   |
|---------------------------------------|---|
| Proper Shipping Name (ADN)            | : DIETHYL CARBONATE                             |
| Proper Shipping Name (RID)            | : DIETHYL CARBONATE                             |
| Transport document description (ADR)  | : UN 2366 DIETHYL CARBONATE, 3, III, (D/E)      |
| Transport document description (IMDG) | : UN 2366 DIETHYL CARBONATE, 3, III (25°C c.c.) |
| Transport document description (IATA) | : UN 2366 Diethyl carbonate, 3, III             |
| Transport document description (ADN)  | : UN 2366 DIETHYL CARBONATE, 3, III             |
| Transport document description (RID)  | : UN 2366 DIETHYL CARBONATE, 3, III             |

### 14.3. Transport hazard class(es)

#### ADR

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 3 |
| Danger labels (ADR)              | : 3 |



#### IMDG

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 3 |
| Danger labels (IMDG)              | : 3 |



#### IATA

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 3 |
| Hazard labels (IATA)              | : 3 |



#### ADN

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADN) | : 3 |
| Danger labels (ADN)              | : 3 |



#### RID

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (RID) | : 3 |
| Danger labels (RID)              | : 3 |



# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

### 14.4. Packing group

|                      |       |
|----------------------|-------|
| Packing group (ADR)  | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN)  | : III |
| Packing group (RID)  | : III |

### 14.5. Environmental hazards

|                               |  |
|-------------------------------|--|
| Dangerous for the environment | : No                                     |
| Marine pollutant              | : No                                     |
| Other information             | : No supplementary information available |

### 14.6. Special precautions for user

#### - Overland transport

|   |                           |
|---|---------------------------|
| Classification code (ADR)                                 | : F1                      |
| Limited quantities (ADR)                                  | : 5I                      |
| Excepted quantities (ADR)                                 | : E1                      |
| Packing instructions (ADR)                                | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (ADR)                            | : MP19                    |
| Portable tank and bulk container instructions (ADR)       | : T2                      |
| Portable tank and bulk container special provisions (ADR) | : TP1                     |
| Tank code (ADR)   | : LGBF                    |
| Vehicle for tank carriage                                 | : FL                      |
| Transport category (ADR)                                  | : 3                       |
| Special provisions for carriage - Packages (ADR)          | : V12                     |
| Special provisions for carriage - Operation (ADR)         | : S2                      |
| Hazard identification number (Kemler No.)                 | : 30                      |
| Orange plates   | :                         |



|                               |       |
|-------------------------------|-------|
| Tunnel restriction code (ADR) | : D/E |
| EAC code                      | : 3Y  |

#### - Transport by sea

|                                    |  |
|------------------------------------|--|
| Packing instructions (IMDG)        | : P001, LP01   |
| IBC packing instructions (IMDG)    | : IBC03  |
| Tank instructions (IMDG)           | : T2   |
| Tank special provisions (IMDG)     | : TP1  |
| EmS-No. (Fire)                     | : F-E  |
| EmS-No. (Spillage)                 | : S-D  |
| Stowage category (IMDG)            | : A  |
| Flash point (IMDG)                 | : 25°C to 31°C c.c.  |
| Properties and observations (IMDG) | : Colourless liquid. Flashpoint: 25°C to 31°C c.c. Vapour much heavier than air (4.1). Immiscible with water. Irritating to skin, eyes and mucous membranes. |
| MFAG-No                            | : 128  |

#### - Air transport

|                                |        |
|--------------------------------|--------|
| PCA Excepted quantities (IATA) | : E1   |
| PCA Limited quantities (IATA)  | : Y344 |



# DIETHYL CARBONATE FOR SYNTHESIS

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|  |        |
|--|--------|
| PCA limited quantity max net quantity (IATA) | : 10L  |
| PCA packing instructions (IATA)              | : 355  |
| PCA max net quantity (IATA)                  | : 60L  |
| CAO packing instructions (IATA)              | : 366  |
| CAO max net quantity (IATA)                  | : 220L |
| ERG code (IATA)                              | : 3L   |

### - Inland waterway transport

|                                   |             |
|-----------------------------------|-------------|
| Classification code (ADN)         | : F1        |
| Limited quantities (ADN)          | : 5 L       |
| Excepted quantities (ADN)         | : E1        |
| Equipment required (ADN)          | : PP, EX, A |
| Ventilation (ADN)                 | : VE01      |
| Number of blue cones/lights (ADN) | : 0         |

### - Rail transport

|   |                           |
|---|---------------------------|
| Classification code (RID)                                 | : F1                      |
| Excepted quantities (RID)                                 | : E1                      |
| Packing instructions (RID)                                | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID)                            | : MP19                    |
| Portable tank and bulk container instructions (RID)       | : T2                      |
| Portable tank and bulk container special provisions (RID) | : TP1                     |
| Tank codes for RID tanks (RID)                            | : LGBF                    |
| Transport category (RID)                                  | : 3                       |
| Special provisions for carriage – Packages (RID)          | : W12                     |
| Colis express (express parcels) (RID)                     | : CE4                     |
| Hazard identification number (RID)                        | : 30                      |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

DIETHYL CARBONATE FOR SYNTHESIS is not on the REACH Candidate List

DIETHYL CARBONATE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 2559)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

# DIETHYL CARBONATE FOR SYNTHESIS

## Safety Data Sheet

### Netherlands

|   |                               |
|---|-------------------------------|
| SZW-lijst van kankerverwekkende stoffen   | : The substance is not listed |
| SZW-lijst van mutagene stoffen  | : The substance is not listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding   | : The substance is not listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid | : The substance is not listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling   | : The substance is not listed |

### Denmark

|                                   |  |
|-----------------------------------|--|
| Class for fire hazard             | : Class II-1   |
| Store unit                        | : 5 liter  |
| Classification remarks            | : R10 <H226;H315;H319;H335>; Emergency management guidelines for the storage of flammable liquids must be followed |
| Recommendations Danish Regulation | : Young people below the age of 18 years are not allowed to use the product  |

## 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-statements:

|               |  |
|---------------|--|
| Eye Irrit. 2  | Serious eye damage/eye irritation, Category 2  |
| Flam. Liq. 3  | Flammable liquids, Category 3  |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2  |
| STOT SE 3     | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H226          | Flammable liquid and vapour.   |
| H315          | Causes skin irritation.  |
| H319          | Causes serious eye irritation.   |
| H335          | May cause respiratory irritation.  |
| R10           | Flammable  |
| R36/37/38     | Irritating to eyes, respiratory system and skin  |
| Xi            | Irritant   |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*