

# Carbofuran: sc-207404



*The Power to Question*

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Carbofuran

**Product Number:** sc-207404

**Supplier:** Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, CA 95060  
800.457.3801 or 831.457.3800

**Emergency:** ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Toxic by skin absorption

#### Target Organs

Cardiovascular system., Central nervous system, Blood

#### Other hazards which do not result in classification

Lachrymator.

#### GHS Label elements, including precautionary statements

Pictogram



Signal word      Danger

Hazard statement(s)

H300 + H330      Fatal if swallowed or if inhaled.

H311      Toxic in contact with skin.

H400      Very toxic to aquatic life.

Precautionary statement(s)

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

P264      Wash skin thoroughly after handling.

P270      Do not eat, drink or smoke when using this product.

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

P273      Avoid release to the environment.

P280      Wear protective gloves/protective clothing.

P284      Wear respiratory protection.

P301 + P310      IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302 + P352      IF ON SKIN: Wash with plenty of soap and water.

P304 + P340      IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P310      Immediately call a POISON CENTER or doctor/physician.

P320      Specific treatment is urgent (see supplemental first aid instructions on this label).

P330      Rinse mouth.

P361      Remove/Take off immediately all contaminated clothing.

P363      Wash contaminated clothing before reuse.

P391      Collect spillage.

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

P405      Store locked up.

P501 Dispose of contents/container to an approved waste disposal plant.

**HMIS Classification**

**Health hazard:** 4

**Chronic Health Hazard:** \*

**Flammability:** 0

**Physical hazards:** 0

**NFPA Rating**

**Health hazard:** 4

**Fire:** 0

**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be fatal if inhaled. May cause respiratory tract irritation.

**Skin** Toxic if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.

**Eyes** May cause eye irritation.

**Ingestion** May be fatal if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 2,3-Dihydro-2,2-dimethyl-7-benzofuranol *N*-methylcarbamate

Formula : C<sub>12</sub>H<sub>15</sub>NO<sub>3</sub>

Molecular Weight : 221.25 g/mol

<i>CAS-No.</i>	<i>EC-No.</i>	<i>Index-No.</i>	<i>Concentration</i>
<b>2,3-Dihydro-2,2-dimethylbenzofuran-7-yl <i>N</i>-methylcarbamate</b>			
1563-66-2	216-353-0	006-026-00-9	—

### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate	1563-66-2	TWA	0.1 mg/m <sup>3</sup>	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Cholinesterase inhibition Substances for which there is a Biological Exposure Index or Indices (see BEI® section), see BEI® for Acetylcholinesterase Inhibiting Pesticide Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		TWA	0.1 mg/m <sup>3</sup>	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	solid	pH	no data available
Melting point	150 – 153 °C (302 – 307 °F) – lit.	Boiling point	no data available
Flash point	no data available	Ignition temperature	no data available
Lower explosion limit	no data available	Upper explosion limit	no data available
Water solubility	no data available		

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral – rat – 5 mg/kg

LC50 Inhalation – guinea pig – 4 h – 43 mg/m<sup>3</sup>

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation.

Behavioral:Somnolence

(general depressed activity). Behavioral:Convulsions or effect on seizure threshold.

LC50 Inhalation – rat – 85 mg/m<sup>3</sup>

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Gastrointestinal:Changes in structure or function of salivary glands. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

LD50 Dermal – rabbit – 885 mg/kg

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

no data available

### Specific target organ toxicity – single exposure (GHS)

no data available

### Specific target organ toxicity – repeated exposure (GHS)

no data available

### Aspiration hazard

no data available

### Potential health effects

**Inhalation** May be fatal if inhaled. May cause respiratory tract irritation.

**Ingestion** May be fatal if swallowed.

**Skin** Toxic if absorbed through skin. May cause skin irritation. May be fatal if absorbed through skin.

**Eyes** May cause eye irritation.

### Signs and Symptoms of Exposure

May cause cyanosis., Cough, Shortness of breath, Headache, Nausea, Vomiting, Gastrointestinal disturbance, Incoordination., Lachrymation, Convulsions

### Additional Information

## 12. ECOLOGICAL INFORMATION

### Toxicity

Toxicity to fish LC50 – *Oncorhynchus mykiss* (rainbow trout) – 0.38 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates. mortality NOEC – *Daphnia* – 0.001 mg/l – 7 d

EC50 – *Daphnia magna* (Water flea) – 0.0018 mg/l – 48 h

mortality LOEC – *Daphnia* – 0.003 mg/l – 7 d

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. no data available

**13. DISPOSAL CONSIDERATIONS****Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**

UN-Number: 2811                      Class: 6.1                      Packing group: I  
Proper shipping name: Toxic solids, organic, n.o.s. (2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate)  
Reportable Quantity (RQ): 10 lbs  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN-Number: 2811                      Class: 6.1                      Packing group: I                      EMS-No: F-A, S-A  
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate)  
Marine pollutant: No

**IATA**

UN-Number: 2811                      Class: 6.1                      Packing group: I  
Proper shipping name: Toxic solid, organic, n.o.s. (2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate)  
IATA Passenger: Not permitted for transport

**15. REGULATORY INFORMATION****OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Toxic by skin absorption

**DSL Status**

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate	CAS-No. 1563-66-2
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**SARA 302 Components**

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate	CAS-No. 1563-66-2
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**SARA 313 Components**

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate	CAS-No. 1563-66-2
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**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate	CAS-No. 1563-66-2
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**Pennsylvania Right To Know Components**

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate

CAS-No.  
1563-66-2

**New Jersey Right To Know Components**

2,3-Dihydro-2,2-dimethylbenzofuran-7-yl N-methylcarbamate

CAS-No.  
1563-66-2

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION**

*The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.*

02/11/2011