



## **MATERIAL SAFETY DATA SHEET**

### **Manufacturer/information service:**

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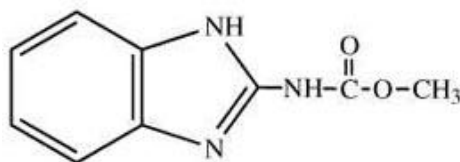
### **1. Chemical Product Identification**

Product Name: Carbendazim TC

Molecular Formula:  $C_9H_9N_3O_2$

Molecular Weight: 191.22g/mol

Structural Formula:



Chemical Name:

Methylbenzimidazole-2-ylcarbamate (IUPAC).

Form: Powder

Color: White

Odor: Odorless

CAS No.: 10605-21-7

UN No.: 3077

### **2. Composition / Information On Ingredients**

Composition	CAS No.	Content %
Carbendazim	10605-21-7	98.0
Others ingredients		2.0



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### **3. Hazards Identification**

Possible risk of irreversible effects.

### **4. First Aid Measures**

Skin: Remove contaminated clothes. Rinse and then wash skin with plenty of water immediately.

Eyes: Rinse with plenty of water for several minutes (remove contact lenses if easily possible) immediately.

Ingestion: If swallowed induce vomiting by tickling the back of throat. Be quiet and call a physician

Notes to physician: No specific antidote if ingested. Treat symptomatically.

### **5. Fire-Fighting Measures**

Extinguishing media

To be used: Powder, Water spray.

Don't use: Not applicable

Particular risk: None

Measures of personal protection: Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

### **6. Accidental Release Measures**

Personal cautions: Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

Cleaning methods

EX: The empty container may be decontaminated by rinsing two or three times with water and detergent and scrubbing the sides.

Environmental cautions

EX: Prevent the contamination of the floor and the beds of water.

### **7. Handling and Storage**

Handling: Do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: Store at normal temperatures, away from children, domestic animals, food and feed products, seed and fertilizer. Do not contaminate other stored products or the storage area by



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handling or storage of this product. Keep in a well-ventilated room.

## **8. Exposure Controls / Personal Protection**

Personal protective equipment

Respiratory protection: Approved respirator

Protective gloves: Rubber gloves

Eye protection: Safety goggles or face shield.

Industrial hygiene: adequate ventilation.

## **9. Physical And Chemical Properties**

Appearance: White powder;

Melting point: 305°C;

Boiling point: Decomposes before boiling;

Density: 1.45 at 20°C;

Water solubility: 29 mg/l(pH 4), 8mg /l (pH 7), 7mg/l (pH 8) (24°C);

Other solubility: In dimethylformamide 5, acetone 0.3, ethanol 0.3, chloroform 0.1, ethyl acetate 0.135, dichloromethane 0.068, benzene 0.036, cyclohexane <0.01, diethyl ether<0.01, hexane 0.0005 (all in g/l, 24°C);

Acidity:  $\leq 0.5\%$ (calculated as H<sub>2</sub>SO<sub>4</sub>);

Flash point: Not highly flammable;

Octanol/water partition coefficient: Kow log P= 1.48(Ph=7, 20°C);

## **10. Stability And Reactivity**

Stability: Decomposes at m.p. Stable for at least 2 y below 50°C. Slowly decomposed in alkaline solution (22°C); DT50 >350 d(pH 5 and pH 7), 124 d (pH 9).

Stable in acids, forming water-soluble salts;

Incompatibility (Materials to Avoid): Incompatible with alkaline materials;

Hazardous reaction: The substance decomposes slowly on contact with bases.

## **11. Toxicological Information**

Acute LD50 oral rats: > 10000 a.i.mg/kg.

Acute LD50 dermal rats: > 2000 a.i.mg/kg.

Acute LC50 inhalation rats (4 h): > 5.8 a.i.mg/l.

Eye irritation: Non-irritant.



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Skin irritation: Non-irritant.

Skin sensitization: Not a sensitiser.

## **12. Ecological And Ecotoxicological Information**

Effect on birds: Acute oral LD50 for Japanese quail is >2250 a.i.mg/kg.

Effect on fish: Acute LC50 (96 h) for Rainbow trout is 0.19 a.i.mg/l.

Effects on aquatic invertebrates: Acute EC50 (48 h) for Daphnia magna is 0.15 a.i.mg/l.

Effects on algae: Acute 72 hour EC50 for Scenedemus subspicatus is >7.7 a.i.mg/l.

Effects on bees: contact acute 48 hour LD50 is >50 µg/bee, oral acute 48 hour LD50 is >756 a.i.µg/bee.

Effects on earthworms: Acute 14 day LC50 is 5.4 a.i.mg/kg.

## **13. Disposal Considerations**

Disposal must be in accordance with applicable local regulations. Remove no usable solid materials and/or contaminated soil for disposal in an approved and permitted landfill. Do not flush into surface water or sanitary sewer systems.

Spillage disposal: Do not wash away into sewer. Do not let this chemical enter the environment. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.

## **14. Transport Information**

Do not transport with food and feed stuff;

Class: 6.1

## **15. Regulatory Information**

Routes of exposure: The substance can be absorbed into the body by inhalation of its aerosol.

Environmental Data: The substance is very toxic to aquatic organisms. Avoid release to the environment in circumstances different to normal use.

## **16. Other Information**

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information



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applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.