

MATERIAL SAFETY DATA SHEET OF

CARBENDAZIM 98% TC

1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Supplier: Shanghai Bosman Industrial Co., Ltd

Street address: No. 1611, North Sichuan Road, Hongkou, Shanghai R.P. China

Tel: + 86 21 63065878

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Product name: Carbendazim 98% TC

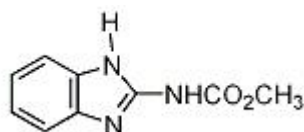
2. COMPOSITION/INFORMATION ON INGREDIENTS

Formulation Type: Technical grade (TC)

Active Ingredients: Carbendazim

IUPAC name: methyl benzimidazol-2-ylcarbamate

Structural Formula:



Composition:

INGREDIENT	CAS NO	PROPORTION
Carbendazim	10605-21-7	98% min.
other	Not available	Up to 100%

Other ingredients determined not to be hazardous

3. HAZARDS IDENTIFICATION

Skin Non- irritant, sensitisation dermatitis may occur in persons previously exposed.

Eyes Non- irritant.

Inhalation The absorption of carbendazim can possibly have irreversible effects.

Ingestion The absorption of carbendazim can possibly have irreversible effects.

Other information --

Physical/chemical effects --

Environmental effects Toxic to aquatic organisms.

4. FIRST AID MEASURES

Skin contact Remove all contaminated clothes and shoes. Wash off immediately with soap and plenty of water (15 - 20 minutes). Get medical attention if irritation persists.

Eyes contact Rinse immediately with plenty of water and seek medical advice.

Inhalation Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

Ingestion Remove by gastric lavage and catharsis. Maintain blood pressure and airway. Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is unconscious. Get medical attention immediately.

Other information Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing High pressure water jet media.

Special exposure hazards Carbon oxides, Nitrogen oxides (NO_x)

Special protective As for all fires involving chemicals : chemical protection suit, suitable gloves equipment for fire-fighters and boots, and self-contained breathing apparatus.

6. ACCIDENT RELEASE MEASURES

Personal precautions

Use personal protective equipment.

Methods for cleaning up

Do not touch spilled material. Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into containers for later disposal. For small dry spills, with a clean shovel place material into clean, dry containers and cover. Move containers from spill area. For larger spills, dike far ahead of spill for later disposal. Keep unnecessary people away. Isolate hazard area and deny entry. Ventilate closed space.

7. HANDLING AND STORAGE

Handling precautions

Keep product in original tightly closed container; avoid exposure by inhalation; do not get on skin, eyes or clothing; do not eat, drink or smoke when handling; wash hands before eating, drinking or smoking.



Storage

Store in locked, well-ventilated storeroom, away from children and unauthorised personnel, and food and animal feed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator: It is usually safe to use the product without respirator. Where exposure through inhalation may occur when handling and or using the product, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.

Clothing: Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves: Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection: The use of chemical resistant goggles or face shield. Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White powder

Odour: Light

Density: NA

Water solubility: approx. 8 mg/l (pH 7)

pH: NA

Flash point: NA

Flammability: Not flammable.

10. STABILITY AND REACTIVITY

Stability Stable under normal temperatures and pressures.

Conditions to avoid No special precautions other than good housekeeping of chemicals.

Material to avoid Alkaline materials can cause hydrolysis.

Hazardous decomposition Thermal decomposition products may include toxic oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

Acute LD50 oral rats: > 10 000 mg/kg.

Acute LD50 dermal rats: > 2 000 mg/kg.

Acute LC50 inhalation rats (4 h): > 5.9 mg/l (carbendazim).

Eye irritation: Non-irritant.

Skin irritation: Non-irritant.

Skin sensitization: Not determined, but carbendazim is not a sensitiser.

Carcinogen status: Not carcinogenic.

Mutagenicity: Carbendazim is not mutagenic but phenazines, possible contaminants of the technical material, are mutagenic at very low concentrations.

Reproductive toxicity: Not teratogenic.

ADI (man) mg/kg: 0.03 mg/kg b.w.

12. ECOLOGICAL INFORMATION

Birds Acute oral LD50 for quail 5826–15 595 mg/kg. Fish LC50 (96 h) for carp 0.61, rainbow trout 0.83, bluegill sunfish >17.25, guppies >8 mg/l.

Daphnia LC50 (48 h) 0.13–0.22 mg/l.

Algae EC50 (72 h) for *Scenedesmus subspicatus* 419, *Selenastrum capricornutum* 1.3 mg/l.

Bees LD50 (contact) >50 µg/bee.

Worms LC50 (4 w) for *Eisenia foetida* 6 mg/kg soil.

13. DISPOSAL CONSIDERATION

Pesticide disposal

Bury in a specially designated landfill (soil burial should suffice, do not contaminate water sources). Always dispose of in accordance with local regulations.

Container disposal

Packaging should be disposed of at a specialised chemical waste disposal facility.

14. TRANSPORT INFORMATION

UN No.: 3077

Class: 9

Packing group: III



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Website: www.bosmanagrochem.net

Shipping name: Environmentally hazardous substance, Liquid, N.O.S. ((Carbendazim)

15. REGULATORY INFORMATION

Follow all local and international laws and regulations.

16. OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact the company.

--END OF MSDS --