

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name: Carbendazim 500G/L SC
Other name: /
Recommended use of the chemical and restrictions on use Fungicide
Supplier name: Shandong Weifang Rainbow Chemical Co., Ltd.
Supplier address: Binhai Economic Development Area, Weifang, Shandong, China
Supplier phone: +86-531-88875222, 88875231
Supplier fax: +86-531-88875232, 88875224
Emergency phone number: +86-531-88875222

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute toxicity - Dermal (Category 5)

Acute toxicity - Inhalation (Category 5)

Eye irritation (Category 2B)

Hazardous to the aquatic environment — Acute Hazard (Category 2)

GHS Label elements, including precautionary statements:

No required

Signal word: Warning

Hazard statements:

H313: May be harmful in contact with skin

H320: Causes eye irritation

H333: May be harmful if inhaled

H401: Toxic to aquatic life.

Precautionary statements:

P264 + P265 Wash hands thoroughly after handling. Do not touch eyes.

P273 Avoid release to the environment.

P302 + P317 IF ON SKIN: Get medical help.

P304 + P317 IF INHALED: Get medical help.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P317 If eye irritation persists: Get medical help.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification:

Not available

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Carbendazim	10605-21-7	500G/L
Other ingredients	/	Up to 1L

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4. FIRST - AID MEASURES

Description of necessary first aid measures

Ingestion: Rinse mouth. DO NOT INDUCE VOMITING. Obtain emergency medical attention.

Inhalation: Assure fresh air breathing. Rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical advice.

Skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medical attention if ill effect develops.

Eye contact: Rinse immediately with plenty of water. Obtain emergency medical attention if pain, blinking, tears or redness persist.

Advice to doctors: Apply basic aid and decontamination procedures. Treat symptomatically.

Most important symptoms/effects, acute and delayed

Not available

Indication of immediate medical attention and special treatment needed:

Not available.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Water. Foam. Carbon dioxide. Dry chemical. Use extinguishing media appropriate for surrounding fire.

Special hazards arising from the chemical:

High temperature may liberate toxic gases. Carbon dioxide. Carbon monoxide. Nitrogen oxides.

Special protective actions for fire-fighters:

Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

Environmental precautions:

Notify authorities if product enters sewers or public waters.

Methods and materials for containment and cleaning up:

Clean up any spills as soon as possible, using an absorbent material to collect it.

7. HANDLING AND STORAGE

Precautions for safe handling:

Ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

Conditions for safe storage, including any incompatibilities:

Store in dry, cool, well-ventilated area. Keep container closed when not in use. Store above -10°C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls:

Use in well ventilated areas. Keep containers closed when not in use.

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Personal protective equipment:

RESPIRATORY PROTECTION: Approved dust or mist respirator should be used if airborne particles are generated when handling this material.

SKIN PROTECTION: Gloves.

EYE PROTECTION: Even though no specific eye irritation data is available, wear eye protection appropriate to conditions of use when handling this material.

INGESTION: When using, do not eat, drink or smoke.

INDUSTRIAL HYGIENE: Provide adequate ventilation to minimize dust and/or vapour concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color etc.):	Off-white to white flowable Liquid
Odor:	Odorless
Odor threshold:	No data available
pH:	5.0-8.0
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	Not flammable
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	1.16-1.20 g/ml
Solubility(ies):	Disperse in water
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

10. STABILITY AND REACTIVITY

Reactivity:

Normally stable.

Chemical stability:

Decomposes at m.p.; stable for at least 2 y below 50 °C. Stable after 7 d at 20 000 lux. Slowly decomposed in alkaline solution (22 °C). Stable in acids, forming water-soluble salts

Possibility of hazardous reactions:

Unknown.

Conditions to avoid:

Extreme heat and fire.

Incompatible materials:

Incompatible with alkaline materials.

Hazardous decomposition products:

Non-known.

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11. TOXICOLOGICAL INFORMATION

Acute health effects:

Eye irritation	Mild irritant
Skin irritation	Non-irritant
Skin sensitization	Not sensitizing

Numerical measures of toxicity:

Acute oral LD ₅₀ :	>5000 mg/kg in the rat
Acute dermal LD ₅₀ :	>4000 mg/kg in the rat
Acute inhalation LC ₅₀ :	>6.2 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish - 96 hour LC ₅₀	>1.0 mg/L
Daphnia - 48 hour EC ₅₀	2.16 mg/L
Algae – 72 hour EC ₅₀	3.67 mg/L
Birds - Acute LD ₅₀	>2000 mg/kg
Honeybee – Acute oral LD ₅₀	>100 µg/bee
Earthworm - Acute LD ₅₀	10.4mg/kg

Persistence and degradability:

Soil degradation: Lab studies DT₅₀ range 20-40 days, DT₉₀ range 86-226 days; Field studies DT₅₀ range 11-78 days, DT₉₀ range 36-257 days

Aqueous photolysis DT₅₀ (days) at pH 7: Stable at pH 5 to pH 7, DT₅₀ 22-124 days at pH 9

Aqueous hydrolysis DT₅₀ (days) at 20 °C and pH 7: pH5:>350 days; pH7:>350 days; pH9: 54-124 days, all at 22-25 °C

Bioaccumulative potential:

Carbendazim: log K_{OW} = 1.56

Mobility in the soil:

Carbendazim: medium mobility K_{Foc} 200-246 mL/g.

Other adverse effects:

Not available.

13. DISPOSAL CONSIDERATIONS

Safe handling of waste residues and disposal methods:

PRODUCT	Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities/equipment available. Burn in special, controlled high temperature incinerator.
DISPOSAL	Otherwise bury in approved landfill. Follow all local/ regional/ national/ international regulations.
CONTAINER	Emptied packaging may retain product residue. Observe all labelled safeguards until packaging is destroyed. Store for collection by approved waste disposal service or dispose of by burying in approved landfill.
DISPOSAL	

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14. TRANSPORT INFORMATION

UN Number: 3082

Road Transport ADR/IRD:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Maritime Transport IMDG/IMO:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Marine Pollutant (Y/N): Yes

Air transport IATA/ICAO:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Special/Environmental Precautions: None known.

15. REGULATORY INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with local laws.

16. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

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