

MATERIAL SAFETY DATA SHEET

PRODUCT : Carbendazim 46.27% SC

PRODUCT DESIGNATION : Fungicide

Section 1. Product & Company Identification

Common Name : Carbendazim
Grade : Formulation
Active Ingredient : Carbendazim
Chemical Name of Active : methyl benzimidazol-2-ylcarbamate.
Ingredient (IUPAC)
Chemical Family of A. I. : Benzimidazole
Molecular Formula of A. I. : $C_9H_9N_3O_2$
Molecular Mass of A. I. : 191.2
Manufacturer & Supplier : **M/s United Chemicals**
Head office:B-371, 1st Floor, Meera Bagh, New Delhi,
Factory:15/1, 15/2, 15/3, Industrial Estate, Vidisha,
(M.P)
Telephone Number : +91-11-25258770-71-72 /42334229

Section 2. Composition / Information on Ingredients

<u>Name of Components</u>	<u>Concentration% w/w</u>
Carbendazim a.i.	46.27% w/w
Inert ingredient	53.73% w/w
TOTAL	100.00% w/w

Section 3. Hazards Identification

Physical/chemical hazards : Not flammable.
Human health hazards : Mildly irritating to eyes and skin.
No sensitization by skin contact.
May cause damage if aspirated into the lungs

Environmental hazards : Non Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 4. First Aid Measures

Eye Contact: Irrigate the eyes with large amount water or normal saline occasionally lifting upper and lower lids until no evidence of chemical remains and obtain a medical help.

Skin contact: Remove contaminated clothing and shoes immediately. Wash contaminated area with soap or mild detergent and large amount of water until no effects of chemical remains. If symptoms persist get medical help.

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 victim is unconscious. Get medical attention immediately.

Inhalation: Remove the patient from the exposure area to fresh air immediately. If breathing has stopped perform the artificial respiration. Keep person warm and rest. Get medical attention immediately.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media: Dry chemical, CO₂, Water spray, standard foam. For larger fire, use water spray, fog or standard foam.

Exposure Hazards: During a fire, irritating and possibly toxic gases like carbon dioxide; carbon monoxide; nitrogen oxides; sulfur dioxide; hydrogen chloride; may be generated by thermal decomposition or combustion

Fire-Fighting: Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate non essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

Section 6. Accidental Release Measures

Personal Protection: Avoid contact with skin, eyes and clothing.

Environmental Precautions: Prevent contamination of soil, drains and surface water.

Method of cleaning: Absorb the material in the sand, soil, diatomaceous earth or suitable absorbent. Place in suitable material and remove to safe place or dispose of in an incinerator approved for chemicals.

Section 7. Handling & Storage

Precautions in Handling: Use appropriate (impervious) clothing, gloves and closed foot ware to prevent the repeated contact with skin. Use flash proof and dust resistant goggles to prevent the contact with eyes.

Precautions in Storage: Keep the product in original container tightly closed and correctly labeled. Store in suitable, cool, dry, well ventilated place under lock and key; away from the reach of the children, animals, food and animal feeding stuffs. Store away from the incompatible substances and source of ignition

Section 8. Exposure Control, Personal Protection

Exposure Limit Values : N/A

Engineering Controlled: When engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure controls techniques may be used to effectively minimize employee exposures general area dilution/exhaust ventilation.

Personal Protection Equipment (PPE):

Protective Gloves: Wear heavy duty appropriate gloves

Eye Protection: Wear splash proof or dust resistant safety goggles and face shield.

Body Protection: Wear overalls and closed footwear.

Section 9. Physical and Chemical Properties

Appearance / state	:	Gray-white liquid suspension
Odour	:	Faint mild odour
Boiling point	:	Approximately 100°C at 100kPa.
Density	:	1.2 approx at 20°C
Melting Point	:	Approximately 0°C.
Flash point	:	Not applicable, water based formulation

pH : 6-8
Flammability : Not flammable

Section 10. Stability & Reactivity

Thermal Stability: Stable to heat.

Conditions to avoid: Direct source of heat/open flames.

Material to avoid: Alkaline material

Hazardous Decomposition Products: During a fire, irritating and possibly toxic gases like carbon dioxide; carbon monoxide; nitrogen oxides; sulfur dioxide; hydrogen chloride; may be generated by thermal decomposition or combustion.

Section 11. Toxicological Information

Route(s) of Entry

Acute LD50 Oral, rat: > 2000 mg/kg b/w

Acute LD50 Dermal, Rabbit: > 2000 mg/kg b/w

Acute (4h) LC50 Inhalation: 2.0 mg/l

Eye Irritation Test: Mildly irritating to Rabbit Eye.

Skin Irritation Test: Non irritation to Rabbit Skin.

Skin Sensitization: Not a sensitizer to skin of Guinea Pig.

Section 12. Ecological Information

Acute Oral Toxicity in Birds: In Quail : 5826 – 15,595 mg/kg of body weight

Acute Toxicity in Fish (96 hrs LC₅₀): Rainbow trout: 0.83mg/l

Acute Toxicity Honey bees: > 50 µg/kg.

EC50 (48 h) for Daphnia: > 0.13-0.22 mg/l

Section 13. Disposal Consideration

Pesticide Disposal: Burn in high temperature incinerator with effluent scrubbing or bury in a specially designated landfill. Always dispose of in accordance with local regulations.

Containers: Contaminated packaging material should be treated as the product.

Section 14. Transport Information

IMDG Classification

Shipping name	: Pesticide Liquid, Toxic NOS
Class	: 9
Packing Instruction	: III
UN number	: 3082
Marine pollutant	: Yes

Section 15. Regulatory Information

Classification	: Toxic
Risk phrases	: R51: Toxic to aquatic organisms.
Safety phrases	: S2: Keep out of the reach of children S13: Keep away from food, drink and animal feeding stuffs S20/21: When using do not eat, drink or smoke S46: If swallowed, seek medical advice immediately and show this container or label S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

Section 16. Other Information

Incompatible with the alkaline material.

Antidote: No specific antidote is available. Treat the patient symptomatically and supportively.

This product should be stored, handled and used in accordance with good industrial practices and in conformity with legal regulation.

This information is based on present knowledge for your guidance on safety requirements. It is not intended as a specification.

Safety Division : UNITED CHEMICALS, SAFETY DIVISION