

**MATERIAL SAFETY DATA SHEET****1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

Product Name : Carbendazim 12% +Mancozeb 63% WP

Common Name : Carbendazim : Carbendazim
Mancozeb: Mancozeb

IUPAC Name : Carbendazim: Methyl benzimidazol-2-ylcarbamate
Mancozeb: manganese ethylenebis (dithiocarbamate) (polymeric) complex with zinc salt

Chemical Abstracts Name : Carbendazim : methyl 1H-benzimidazol-2-ylcarbamate
Mancozeb : [[1,2-ethanediylbis[carbamo-dithioato]](2-)]manganese mixture with[[1,2-ethanediylbis[carbamo-dithioato]](2-)]zinc

CAS No. : Carbendazim : 10605-21-7
Mancozeb : : 8018-01-7

Chemical formula : Carbendazim : $C_9H_9N_3O_2$
Mancozeb : $[C_4H_6MnN_2S_4]_x Zn_y$

Molecular weight : Carbendazim : 191.2
Mancozeb : 271.2

Chemical Family : Carbendazim : Benzimidazole
Mancozeb: Alkylenebis(dithiocarbamate)

Use : Carbendazim : Fungicide
Mancozeb: Fungicide

Company Name : Solas CropTech Private Limited.

Address : 36, Strand Road, 4th Floor, Room No-01, Kolkata-700001

**MATERIAL SAFETY DATA SHEET**

Phone No. : (033) 2231-3306
E-mail : solascroptech@yahoo.in
Website : www.solascroptech.com
Phone No. : (033) 2231-3306

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Content % (w/w)
Carbendazim	[10605-21-7]	12
Mancozeb	[8018-01-7]	63
Other	-	25

3. HAZARDS IDENTIFICATION

Health Hazards : Hazard to humans and domestic animals. May be fatal if swallowed. Harmful if inhaled. Cause moderate eye irritation.
Environmental Hazards: This product is very toxic to aquatic invertebrates. Keep out of lakes, stream and ponds. Do not discharge effluent containing this product to sewer systems.

Emergency : Warning! Keep out of reach of children. Toxic if swallowed and by inhalation.

Skin and Eyes : Avoid contact with skin and eyes, may cause irritation.

Entry route : Ingestion, Inhalation, Contact with eye or skin.

Symptoms of poisoning : Repeatedly administer medicinal charcoal in a large quantity of water.
NOTE: Never give anything by mouth to an unconscious person. Do not induce vomiting. If medical assistance is not readily available, and poisoning symptoms are severe, vomiting should be induced by tickling the finger on the back of the patient's throat.



MATERIAL SAFETY DATA SHEET

4. FIRST AID MEASURES

Ingestion	: Call a physician or poison control center immediately. Rinse mouth. Induce vomiting only, if patient is fully conscious.
Eye	: Rinse the eyes immediately with water for at least 15 minutes. Remove contact lenses, if it is safe to do so. Get medical advice if irritation persists.
Skin	: Wash the skin immediately with soap and water. If irritation persists, call physician.
Inhalation	: Move the patient to fresh air and call to physician immediately.
Advice to Physician	: Treat as a cholinesterase inhibitor. Atropine in addition oxime preparation such as oxonolone in under medical supervision. Inject 2-4 mg Atropine sulphate (for children 0.2 to 5 mg) i.v. or i.m. every 5 to 10 minutes until signs of atropinisation occurs. The patient must remain atropinised for a length of time (24 to 48 hours) to prevent subsequent poisoning due to delayed resorption.

5. FIRE FIGHTING MEASURES

Specific Hazard	: The product can burn in fire releasing irritating and toxic gases due to thermal decomposition and combustion.
Extinguishing Media	: Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff. CO ₂ , Foam or dry chemical are preferred. Soft stream water fog or fine water sprays if no alternatives. Contain all runoff.
Hazard From Combustion products	: If involved in a fire, it will emit toxic and noxious fumes of oxides of carbon or nitrogen. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke.



MATERIAL SAFETY DATA SHEET

Protective equipment : Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

6. ACCIDENTAL RELEASE MEASURES

In Case of Emergency : Isolate and post spill area. Wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves and eye/face protection to prevent skin and eyes being affected. Evacuate unprotected and unnecessary personnel from area of spill. If material is leaking from a container, stop the leak only if this can be done safely. Prevent spillage entering drains or watercourses. Contain spill and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as per regulations.

Clean up Procedures : To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

7. HANDLING AND STORAGE

Handling : Store the material in a well ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling

Storage : Store the product in closed original containers. Protect from light and humidity. Storage depot protected against fire.

Max. Storage Temperature: 35°C

**MATERIAL SAFETY DATA SHEET**

Min. Storage Temperature: -10°C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Ingestion	: DO NOT eat, drink or apply cosmetics, where there is a potential for exposure to the product.
Eye Protection	: Safety goggles, chemical splash goggles or face shield for eyes protection should be used. Safety showers and eye wash should be easily available.
Skin Protection	: Chemical resistant gloves, coveralls socks, apron and chemical resistant foot covering should always be used while handling the product.
Respiratory protection	: Always use NIOSH/MSHA approved respiratory protection equipment with a universal filter type including particle filter.
General Protection	: Avoid contact with eyes and skin. While handling the product wear cotton overalls buttoned to the neck and wrist. Elbow-length PVC gloves and face shield. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour	: Yellowish powder
Odour	: Weak uncharacteristic
Physical state	: Free flowing powder
Wettability	: 120 seconds Max.
Solubility	: Practically insoluble

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to Avoid	: Avoid direct sunlight.

**MATERIAL SAFETY DATA SHEET**

- Incompatible Materials** : Oxidizing agents, acids, polar solvents such as alcohol.
- Hazardous decomposition products** : When heated to decompose it emits toxic fumes of cyanide, nitrogen oxides. Hazardous Decomposition Products: Carbon monoxide.
- Hazardous Reactions** : Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

- Acute Oral LD₅₀** : LD₅₀ (rats) >5000 mg/kg
- Acute Dermal LD₅₀** : LD₅₀ (Rabbits) >5000 mg/kg b.w
- Acute Inhalation** : LC₅₀ (rats): >5.0 mg/l air
- Skin Irritation** : Rabbit: Non irritant to eye
- Eye Irritation** : Rabbit: Slight irritant to skin
- Skin Sensitization** : Guinea pig: Non-sensitizer

12. ECOLOGICAL INFORMATION

- Bird**
- Chicken** : Acute LD50 :>5000mg/kg
- Japanese quail** : Acute LD50 :>5000mg/kg
- Fish**
- Tilapia** : LC50 : 4.369 mg/l
- mossambica**
- Bees** : LC₅₀ :75.66ppm

13. DISPOSAL CONSIDERATIONS

- Disposal** : This material must be disposed of as a Hazardous Waste. Disposal should be in accordance with local, nation or state rule and regulations.
- Disposal of empty Containers** : Break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for

**MATERIAL SAFETY DATA SHEET**

this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

14. TRANSPORT INFORMATION

Shipping Name : Environmentally hazardous substance, solid, n.o.s. (carbendazim + mancozeb)
UN No. : 3077
Class : 9
Packing group : III
Marine pollutant : Yes

15. REGULATORY INFORMATION

Hazard symbol



Dangerous for the environment (N)

Special Risks (R-Phrases)

R10 - Flammable.
R2 - Harmful if swallowed.
R38 - Irritating to eyes and skin.
R41 - Risk of serious damage to eyes.
R43 - May cause sensitization by skin contact.

Safety Phrase

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.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28 - After contact with skin, wash immediately with plenty of water and soap
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection
S46 - If swallowed, seek medical advice immediately and



MATERIAL SAFETY DATA SHEET

show this container or label.

S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

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 resented in good faith and believed to be correct. This information 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 produces formulations containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS. Accordingly, no guarantee or warrantee expressed or implied is made by Solas Cropotech Private Limited, as to the results to be obtained based upon the user's use of the information, nor does Solas Cropotech Private Limited, assume any liability arising out of user's use of the information.

Date: 11/05/2025
