



## MATERIAL SAFETY DATA SHEET

### SECTION 1 - IDENTIFICATION OF THE SUBSTANCE AND COMPANY

**Company Address:** The National Company For Agrochemicals & Investment

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**Product Name:** BENDAZIN 50% WP (CARBENDAZIM)

**Formulation Type :** Wettable Powder

**CAS RN:** 10605-21-7

**Chemical Name:** Methylbenzimidazol-2-ylcarbamate

**Chemical family:** benzimidazole

### SECTION 2 - COMPOSITION/ INFORMATION ON INGREDIENTS

Component	Percentage	CAS RN
Carbendazim	50%	10605-21-7
Adjuvants	50%	-----

### SECTION 3 - IDENTIFICATION OF HAZARDS

#### Emergency Overview:

- Carbendazim is very rapidly absorbed and eliminated from the body.
- Carbendazim is NOT a cholinesterase inhibitor.
- Harmful if absorbed through skin or inhaled.
- Avoid breathing product vapors or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.
- Dangerous for the environment

#### Potential Health Hazards:

**Skin-** The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitiser.

**Inhalation-** No effect with suspension (10 g/l water).

**Ingestion-** The acute toxicity of this product is low, but it may be harmful if a large amount is swallowed.

**Potential Physical Hazards:** Oxides of carbon and nitrogen may be given off when exposed to extreme heat or fire.



## **SECTION 4- FIRST AID MEASURES**

### **Eye contact**

Immediately flush with plenty of water.

Continue for at least 15 minutes.

If easy to do, remove contact lenses.

Obtain medical attention from an eye specialist.

### **Skin contact**

Immediately wash affected skin with plenty of water.

Use soap if available.

Take off contaminated clothing, wristwatch, jewellery.

Get medical advice from a poison control center or doctor.

Wash clothes and clean shoes before re-use.

### **Inhalation**

Remove to fresh air.

If breathing is difficult, give oxygen.

Get medical advice from a poison control center or doctor.

### **Ingestion**

Do NOT induce vomiting.

Immediately offer water to drink.

Never give anything by mouth to an unconscious person.

## **SECTION 5 - FIRE FIGHTING MEASURES**

### **Extinguishing media**

**Recommended:** Water, foam, dry chemical, carbon dioxide (CO<sub>2</sub>)

### **Unusual fire and explosion hazards**

Minimize use of water to prevent environmental contamination.

Environmental precautions .

### **Hazardous products of combustion**

Carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), hydrogen chloride (HCl) .

### **Fire fighting equipment**

Self-contained breathing apparatus.

Equipment should be thoroughly decontaminated after use.



## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

### **Spillage or Leak Disposal Procedures:**

Shut off or remove any sources of ignition. DO NOT smoke. Avoid contact with the spilled material or contaminated surfaces. When dealing with spills wear personal protective (clothing and equipment). Keep people and animals away and upwind. Prevent spilled material from entering drains or watercourses. Contain spill - remove liquid mechanically (explosion proof or hand pump) or absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, loosely covered drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

### **Waste Disposal Methods:**

When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressures rinse them before disposal. Add rinsing to spray tank. Do not dispose of undiluted chemicals onsite. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product via a licensed disposal contractor to an approved landfill.

## **SECTION 7 - HANDLING AND STORAGE**

### **Handling**

Avoid contact with eyes, skin and clothing.

Avoid breathing vapour or mist.

Wash hands thoroughly after handling or contact.

When using do not eat, drink or smoke.

Thoroughly clean equipment after use.

Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.

Emptied containers retain vapour and product residue.

**FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.**

### **Storage**

Keep out of reach of children.

Keep away from food, drink and animal feed.

Keep only in the original container.

Keep container tightly closed in a cool, well-ventilated place.



## **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Control process conditions to avoid contact. Use only in well ventilated areas.

### **PERSONAL PROTECTIVE EQUIPMENT:**

**EYE PROTECTION:** Wear Safety Goggles

**CLOTHING:** Wear cotton overalls buttoned to the neck and wrist and a washable hat.

**GLOVES:** Wear elbow length PVC gloves.

**RESPIRATOR:** If inhalation is likely, wear a respirator with an organic vapour cartridge.

**Other:** After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles or face shield, respirator face piece and contaminated clothing.

### **USER SAFETY RECOMMENDATIONS:**

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>PHYSICAL DESCRIPTION:</b>	White Powder
<b>ODOR:</b>	Negligible
<b>MELTING POINT:</b>	302-307 °C (decomp.)
<b>ACIDITY:</b>	0.0686% as H <sub>2</sub> SO <sub>4</sub>
<b>DENISTY:</b>	1.69 ± 0.29 gm/cm <sup>3</sup> at 25 °C
<b>WETTABILITY:</b>	16.72 ± 0.978 sec.
<b>SUSPENSIBILITY:</b>	99% after 30 min.
<b>FOAMING:</b>	20 ml after 1 min
<b>FLAMMABLE:</b>	Not flammable

## **SECTION 10 - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Stable under normal temperatures and pressures.

**INCOMPATIBILITY WITH OTHER MATERIALS:** ACETOCHLOR IS COMPATIBLE WITH MOST OTHER PESTICIDES AND FLUID FERTILIZERS WHEN USED AT RECOMMENDED RATES.

**HAZARDOUS POLYMERIZATION:** **WILL NOT OCCUR IN NORMAL CONDITIONS OF STORAGE**



## **SECTION 11 - TOXICOLOGICAL INFORMATION**

### ***ACUTE TOXICITY:***

Oral LD<sub>50</sub> (rats) - 5000 mg/Kg

Dermal LD<sub>50</sub> (rabbits) - >2000 mg/Kg

Inhalation LC<sub>50</sub> (4 h) for rats, rabbits, guinea pigs or cats, no effect with suspension (10 g/l water).

Eye Irritation (rabbits) - Non-irritating to skin

Skin Irritation (rabbits) - Non-irritating to eyes

Sensitization (guinea pig) - Non-sensitizer

NOEL: (2 y) for dogs 300 mg/kg diet, corresponding to 6-7 mg/kg b.w.

**Other** Acute i.p. LD<sub>50</sub> for male rats 7320, female rats 15 000 mg/kg.

**Toxicity Class** WHO (a.i.) U (**Product unlikely to present acute hazard in normal use**)

## **SECTION 12 - ECOLOGICAL INFORMATION**

### ***FISH TOXICITY:***

LC<sub>50</sub> (96 h) for carp 0.61, rainbow trout 0.83, bluegill sunfish >17.25, guppies >8 mg/l.

### ***AVIAN TOXICITY:***

Acute oral LD<sub>50</sub> for quail 5826-15595 mg/kg.

### ***BEE TOXICITY:***

Not toxic. LD<sub>50</sub> (contact) >50 µg/bee.

### ***DAPHNIA:***

LC<sub>50</sub> (48 h) 0.13-0.22 mg/l.

### ***ALGAE:***

EC<sub>50</sub> (72 h) for *Scenedesmus subspicatus* 419, *Selenastrum capricornutum* 1.3 mg/l.

### ***WORMS:***

LC<sub>50</sub> (4 w) for *Eisenia foetida* 6 mg/kg soil.

## **SECTION 13 - DISPOSAL CONSIDERATIONS**

**WASTE:** Pesticide wastes are toxic and hazardous. Dispose of in accordance with applicable federal, state and local laws and regulations. Do not discharge or pour into soil, drainage system or bodies of water.

**CONTAINER:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning (plastic containers). If burned, stay out of smoke



#### **SECTION 14 - TRANSPORT INFORMATION**

**The data provided in this section is for information only. Please apply the appropriate regulations to properly**

**PROPER SHIPPING NAME:** Environmentally Hazardous Substance, Solid, N.O.S.

**UN NUMBER:** 3077

**HAZARD CLASS:** Class 9

**PACKING GROUP:** III

**PRIMARY/SUBSIDIARY LABEL:** Keep Away From Food

**PRIMARY/SUBSIDIARY PLACARD:** Keep Away From Food

#### **SECTION 15- REGULATORY INFORMATION**

##### **RISK PHRASE**

**N;** Dangerous for the environment

**R46** May cause heritable genetic damage

**R60** May impair fertility

**R61** May cause harm to the unborn child

**R50** Very toxic to aquatic organisms

**R53** May cause long-term adverse effects in the aquatic environment

##### **SAFETY PHRASE**

**S13** Keep away from food, drink and animal feeding stuffs.

**S2** Keep out of reach of children.

#### **SECTION 16 - OTHER INFORMATION**

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