MATERIAL SAFETY DATA SHEET
Ficam® W Insecticide

Date of Issue: October 11, 2002

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name:  Ficam® W Insecticide
Other names: None
Product code: AE B052020 00 WP80 A4
SAP Product code: 131504 (150 g); 131458 (1.5 kg)
Recommended use: An insecticide used in buildings, as a seed treatment and on turf
Supplier: Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd ABN 87 000 226 022
Address: 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia
Telephone: (03) 9248 6888
Facsimile: (03) 9248 6800
Website: www.bayercropscience.com.au
Contact: Technical Manager (03) 9248 6854
Emergency Telephone: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - DANGEROUS GOOD
Toxic if swallowed. Will irritate eyes and skin. Not flammable.

Hazard designation: Hazardous according to criteria of Worksafe Australia.
Risk phrases: R24 – Toxic if swallowed
R23 – Toxic by inhalation
R21 – Harmful in contact with skin
R38 – Irritating to the skin
Safety phrases: Not applicable
ADG classification: Class 6.1
SUSDP classification: Schedule 6

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Number:</th>
<th>Concentration (g/kg):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bendiocarb</td>
<td>[22781-23-3]</td>
<td>800</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>(non hazardous)</td>
<td>200</td>
</tr>
</tbody>
</table>
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4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

**Inhalation:** Remove person to fresh air. If poisoned through lungs, give atropine tablets as above. Artificial respiration may be required. Seek medical advice. Do not give anything by mouth to an unconscious person.

**Skin contact:** If poisoned by skin absorption, remove any contaminated clothing, wash skin thoroughly with soap and water and continue flushing with water for at least 15 minutes. Give atropine tablets as above. Seek medical advice. Launder contaminated clothing before re-use.

**Eye contact:** Rinse immediately with water for at least 15 minutes and seek medical advice.

**Ingestion:** If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.

**First Aid Facilities:** Obtain an emergency supply of atropine tablets 0.6 mg.

**Symptoms:** Like other carbamate insecticides, bendiocarb is a reversible cholinesterase inhibitor. Symptoms typical of cholinesterase inhibition (for all routes of entry) include nausea, diarrhoea, abdominal cramps, muscle weakness, dizziness, pinpoint pupils, chest discomfort, loss of reflexes, blurred vision, headache, sweating, decreased pulse, mental confusion and tremors.

**Medical attention:** Bendiocarb is a carbamate insecticide, which is a reversible cholinesterase inhibitor. Atropine, preferably by injection, is an antidote. Do not use pralidoxime.

5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water fog or fine spray, carbon dioxide, dry chemical, foam.

**Hazards from combustion products:** Fine dust may form explosive mixtures in air. The product is not flammable, but when heated above 125°C will evolve toxic fumes of methyl isocyanate. Water is the preferred extinguishing medium as it decomposes any methyl isocyanate.

**Precautions for fire fighters:** Fire fighters should wear full protective clothing and self-contained breathing apparatus. Do not release contaminated water into the environment.
7. ACCIDENTAL RELEASE MEASURES

Wear suitable protective clothing and remove sources of ignition. Prevent spill from entering drains, sewers or any body of water. Scoop or shovel into sealable containers for disposal, avoiding formation of a dust cloud. If the diluted spray mix is spilt, absorb with an inert absorbent, and scoop up as above. Wash contaminated surface with water.

8. HANDLING AND STORAGE

Handling: Keep out of reach of children. Avoid contact with skin and eyes, and do not inhale dust or spray mist. Use only in a well-ventilated area. Store product in the closed, original container in a safe, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

Storage: Store product in the closed, original container in a safe, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

9. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards: No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia). WHO recommended TLV for bendiocarb is 0.2 mg/m³ (8 h) or 9.6 mg/m³ (10 minutes). ACGIH TLV – TWA – Talc – 2 mg/m³

Production workers and applicators handling this product should be monitored for cholinesterase levels. A baseline level should be established prior to any potential exposure.

Engineering controls: Control process conditions to avoid contact. Use local exhaust ventilation during manufacture and use.

Personal Protective Equipment: Eyes: Face shield or goggles
Clothing: Cotton overalls buttoned to the neck and wrist and a washable hat
Gloves: Elbow-length PVC gloves
Respiratory: Respiratory: Wear a disposable respirator in enclosed areas.
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, face shield or goggles and contaminated clothing.
## 10. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Off-white powder.</td>
</tr>
<tr>
<td>Odour</td>
<td>Practically odourless.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing/melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Forms suspension</td>
</tr>
<tr>
<td>Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>~ 7 (1% in water)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (explosive) limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>Ficam W Insecticide is not flammable. However, dust / air mixtures can build up static electrical charges, and should be kept away from volatile chemicals.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Octanol/water partition</td>
<td>Not available</td>
</tr>
<tr>
<td>coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Formulation</td>
<td>Powder insecticide for use in buildings, as seed treatment and on turf</td>
</tr>
</tbody>
</table>

## 11. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions of use. Fine dust may form explosive mixtures in air.</td>
</tr>
<tr>
<td>Hazardous polymerisation</td>
<td>None</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Avoid heat, oxidising agents and sources of ignition.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>The product is not flammable, but when heated above 125° C will evolve toxic fumes of methyl isocyanate.</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td></td>
</tr>
</tbody>
</table>

## 12. TOXICOLOGICAL INFORMATION

**POTENTIAL HEALTH EFFECTS**

### Inhalation:
Toxic by inhalation.

### Skin contact:
Harmful in contact with skin. Poisonous if absorbed by skin contact.
Will irritate the skin.

**Eye contact:** Contact with the eyes will cause tears and blurred vision. Mildly irritating.

**Ingestion:** Toxic if swallowed. Ingestion causes nausea or vomiting.

**Other:** None

**ANIMAL TOXICITY DATA – PRODUCT:** No data available for the product.

**ANIMAL TOXICITY DATA – ACTIVE INGREDIENT:**

**Acute:**

**Oral toxicity:** LD$_{50}$ rat: >179 mg/kg

**Dermal toxicity:** LD$_{50}$ rabbit: > 1000 mg/kg

**Inhalation toxicity:** LC$_{50}$ (4 h) rat: 0.3mg/L

**Skin irritation:** Not available

**Eye irritation:** Not available

**Sensitisation:** Not available

**Chronic:**

Repeated minor exposure may have a cumulative poisoning effect. The main health effect from repeated exposure would be toxic symptoms of cholinesterase inhibition described above. Bendiocarb is not mutagenic, carcinogenic nor teratogenic.

**13. ECOLOGICAL INFORMATION**

**Fish toxicity:** Bendiocarb: LC$_{50}$: 1.55 mg/L (96 h) rainbow trout.

**Daphnia toxicity:** Not available

**Toxicity to algae:** Not available

**Bird toxicity:** Bendiocarb: LD$_{50}$: 3.1 mg/kg mallard ducks

**Bee toxicity:** Bendiocarb: LD$_{50}$: 19 mg/kg quail

**Other:** Toxic to earthworms.

**Environmental**
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fate, persistence and degradation:

Do not contaminate any body of water with this product. Bendiocarb persistence in soil is low.

14. DISPOSAL CONSIDERATIONS

Follow Avcare guidelines. Check local regulations for disposal of hazardous waste. Avoid release into the environment. Rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Dispose of at 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 the purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

15. TRANSPORT INFORMATION

UN number: 2757
Proper shipping name: CARBAMATE PESTICIDE, SOLID, TOXIC (bendiocarb)
Class and Subsidiary Risk: 6.1
Packing Group: II
EPG: 34 - Dangerous Goods – Initial Emergency Response Guide
Hazchem code: 2X

16. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988
National Registration Authority approval number: 31988

17. OTHER INFORMATION

Trademark information: Ficam® is a Registered Trademark of Bayer.

Reason for update: Conversion to 16 heading format.

Data sources: Bayer CropScience Pty Ltd product safety data and published data

This MSDS summarises 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 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 this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS