

## Material Safety Data Sheet

### Abamectin2%+Fosthiazate13% GR

#### 1. PRODUCT IDENTIFICATION

Product Name: Abamectin2%+Fosthiazate13% GR  
 Common Name: Abamectin; Fosthiazate  
 Chemical Family: Macrolide (Abamectin)  
 Organic Phosphorus (Fosthiazate)  
 Chemical Formula: C<sub>48</sub>H<sub>72</sub>O<sub>14</sub>(Abamectin)  
 C<sub>9</sub>H<sub>18</sub>NO<sub>3</sub>PS<sub>2</sub>(Fosthiazate)  
 Chemical Name: (1'R,2R,3S,4'S,6S,8'R,10'E,12'S,13'S,14'E,16'E,20'R,21'R,24'S)-2-butan-2-yl-21',24'-dihydroxy-12'-[(2R,4S,5S,6S)-5-[(2S,4S,5S,6S)-5-hydroxy-4-methoxy-6-methyloxan-2-yl]oxy-4-methoxy-6-methyloxan-2-yl]oxy-3,11',13',22'-tetramethylspiro [2,3-dihydropyran-6,6'-3,7,19-trioxatetracyclo[15.6.1.14,8.020,24] pentacos-10,14,16,22-tetraene]-2'-one (Abamectin)  
 (RS)-S-sec-butylO-ethyl 2-oxo-1,3-thiazolidin-3ylphosphonothioate (Fosthiazate)  
 CAS No.: 71751-41-2 (Abamectin)  
 98886-44-3 (Fosthiazate)  
 Product Use: Fungicide

#### 2. COMPANY IDENTIFICATION:

**Exporter:**  
 CHICO CROP SCIENCE CO., LTD.  
 Add: Rm 903, Unit C, Tian An International Bldg., Renmin South Rd.,  
 Shenzhen, China.  
 Tel: 86-755-22969199 Fax: 86-755-25919993  
 E-mail: chico1@chicocrop.com

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Ingredient Name</u> | <u>CAS Registry Number</u> | <u>Typical Wt. w/w</u> |
|------------------------|----------------------------|------------------------|
| Abamectin              | 71751-41-2                 | 2.0%                   |
| Fosthiazate            | 98886-44-3                 | 13.0%                  |
| Inert                  | -                          | to balance             |

#### 4. HAZARDS IDENTIFICATION

##### Emergency Overview

Golden yellow particles

**CAUTION!**  
KEEP OUT OF REACH OF CHILDREN  
MAY CAUSED SKIN IRRITATION  
MAY CAUSED EYE IRRITATION

## **Potential Health effects**

Dermal contact, ingest and inhalation of the product are the primary routes to induce potential adverse health effects.

## 5. FIRST AID MEASURES

- If swallowed: Rinse mouth with water. Never give anything by mouth to an unconscious person. Should be send to the hospital treatment immediately.
- If in eye: Hold eyelids apart and flush eyes with plenty of water for at least 15—20 minutes. Consult a physician.
- If on skin: Take off contaminated clothing. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Consult a physician.
- If Inhaled: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

Notes to Physician: There is no specific antidote, Treat symptomatically.

## 6. FIRE FIGHTING MEASURES

### **Fire and explosive Properties**

Auto-Ignition Temperature No available  
Flash Point No available

### **Extinguishing Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **Fire Fighting Instructions**

If firing, fire fighters and others who may be exposed to products of combustion should wear full firefighting turn out gear and self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

## 7. ACCIDENTAL RELEASE MEASURES

### **In Case of Spill or Leak**

Stop the leak, if possible. Ventilated the space involved. Absorb, sweep up, place in container for disposal. Shut off or remove all ignition sources. Prevent waterway

contamination. Construct a dike to prevent spreading. Protect works with water spray. Collect run-off water and transfer to drums or tanks for later disposal.

## 8. HANDLING AND STORAGE

### Handling

Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye irritation. Do not breathe gas or allow to get in eyes, on skin, or on clothing. Wash hands, arm and face thoroughly with soap and warm water after use and before eating or smoking. Wash all contaminated clothing with soap and hot water before reuse. Do not contaminate feed or food items. Keep out of reach of children.

### Storage

Store in a cool dry and air ventilating warehouse and protected from light. Avoid contacting with food, feed stuff and seed.

## 9. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Eye/Face Protection

Goggles and full-face shield should be used when needed to prevent fungicide from face and getting into the eyes.

### Skin Protection

Avoid skin contact. Use chemical-resistant gloves, and wear long sleeves and trousers to prevent dermal exposure.

### Respiratory Protection

Under normal handling conditions no respiratory protection is needed. However, if needed to prevent respiratory irritation, either a respirator approved for dusts and mists, or one approved for pesticides.

## 10. PHYSICAL AND CHEMICAL PROPERTIES

|                 |   |
|-----------------|---|
| Color:          | Golden yellow   |
| Physical state: | Particle  |
| Odor:           | Not obvious odor  |
| pH:             | 6.0-9.0   |
| Melting point   | 161.8-169.4 °C (decomp.) (Abamectin)<br>N/A (Fosthiazate)   |
| Boiling point:  | N/A(Abamectin)<br>198 °C/0.5 mmHg (Fosthiazate)   |
| Vapor pressure: | <3.7 × 10 <sup>-3</sup> mPa (25 °C) (Abamectin)<br>5.6 × 10 <sup>-1</sup> mPa (25 °C) (Fosthiazate) |

|                                 |  |
|---------------------------------|--|
| Solubility in water:            | In water 1.21 mg/l (25 °C). (Abamectin)<br>In water 9.85 g/l (20 °C). (Fosthiazate)  |
| Solubility in organic solvents: | In toluene 23, acetone 72, methanol 13, octanol 83, ethyl acetate 160, dichloromethane 470, hexane 0.11 (all in g/l, 25 °C). (Abamectin)<br>Inn-hexane 15.14 g/l (20 °C); miscible with xylene, N-methylpyrrolidone and isopropyl alcohol. (Fosthiazate) |
| Partition coefficient:          | Kow logP = 4.4±0.3 (pH7.2, room temperature) (Abamectin)<br>Kow logP = 1.68 (Fosthiazate)  |

## 11. STABILITY AND REACTIVITY

### Stability

Stable to hydrolysis in aqueous solutions at pH5, 7, and 9 (25 °C). Sensitive to stronger acid and base. UV irradiation causes conversion first to the 8,9-Z- isomer, then to unidentified decomposition products. Specific rotation  $[\alpha]_{D22}^{25} = 55.7^\circ$  (c = 0.87, CHCl<sub>3</sub>) (Abamectin)  
In water, DT<sub>50</sub> 3 d (pH9, 25 °C). (Fosthiazate)

### Hazardous Polymerization

Does not occur.

### Incompatibility

It is not compatible with strong acid and strong alkaline materials.

### Hazardous Decomposition Products

Thermal decomposition products may include, but are not limited to, carbon monoxide and carbon dioxide.

## 12. TOXICOLOGICAL INFORMATION

**Acute Oral:** Acute oral LD<sub>50</sub> (in sesame oil) for rats 10, mice 13.6 mg/kg; (in water) for rats 221 mg/kg. (Abamectin)

Acute oral LD<sub>50</sub> for male rats 73, female rats 57 mg/kg. (Fosthiazate)

**Acute Dermal:** Acute percutaneous LD<sub>50</sub> for rabbits >2000 mg/kg. (Abamectin)

Acute percutaneous LD<sub>50</sub> for male rats 2396, female rats 861 mg/kg. (Fosthiazate)

**Irritation:** Mild eye irritant; non-irritating to skin (rabbits). (Abamectin)

Not irritating to eyes; not irritating to skin (rabbits). (Fosthiazate)

**Sensitization:** N/A. (Abamectin)

Sensitising to skin (guinea pigs). (Fosthiazate)

**Long-term Studies:** N/A. (Abamectin)

NOEL (2 y) for rats 10.7 ppm (0.42 mg/kg b.w. daily) (EU Rev. Rep.). (2 y) for rats 0.05 mg/kg daily (EPA Fact Sheet). (Fosthiazate)

## 13. ECOLOGICAL INFORMATION

### Ecotoxicological Information

Effects on Birds: Acute oral LD<sub>50</sub> for mallard ducks 84.6, bobwhite quail >2000 mg/kg. (Abamectin)

Acute oral LD<sub>50</sub> for ducks 21, quail 16.38 mg/kg. Dietary LC<sub>50</sub> for ducks 339, quail 139 ppm. (Fosthiazate)

Effects on Fish: LC<sub>50</sub> (96 h) for rainbow trout 3.2, bluegill sunfish 9.6 µg/l. (Abamectin)

LC<sub>50</sub> (96 h) for trout 114, bluegill sunfish 171 mg/l. (Fosthiazate)

Effects on Daphnia: EC<sub>50</sub> (48 h) 0.34 ppb. (Abamectin)

EC<sub>50</sub> (48 h) 0.282 mg/l. (Fosthiazate)

Effects on Algae: EC<sub>50</sub> (72 h) for *Pseudokirchneriella subcapitata* >100 mg/l. (Abamectin)

NOEC (5 d) for *Pseudokirchneriella subcapitata* >4.51 mg/l (EU Rev. Rep.). (Fosthiazate)

Effects on Bees: Toxic to bees. (Abamectin)

LD<sub>50</sub> (48 h) (oral) 0.61 µg/bee; (contact) 0.256 µg/bee. (Fosthiazate)

### Chemical Fate Information

**Animals:** Rapidly eliminated (80–100% in 96 h), mainly via faeces; urinary excretion was 0.5–1.4%. (Abamectin)

Rapidly and extensively absorbed, with >90% excretion, mainly via urine and air, within 48 h. Extensively metabolised, by opening of the thiazolidone ring, hydrolytic and oxidative processes, and subsequent conjugation (EU Rev. Rep.). (Fosthiazate)

**Plants:** Degradation/metabolism in each of three different plants is similar and occurs predominantly by photolysis on the plant surfaces. The definition of the residues is thus expressed as the combined residues of avermectin B1 and its 8,9-Z-avermectin B1 photoisomer. (Abamectin)

N/A. (Fosthiazate)

**Soli/Environment:** Binds tightly to soil, with rapid degradation by soil micro-organisms. No bioaccumulation. (Abamectin)



Terrestrial field dissipation DT<sub>50</sub> 10–17 d. DT50 in aerobic soil 45 d, in anaerobic water sediment 37 d. Mean K<sub>foc</sub> 59 (EU Rev. Rep. and EPA Fact Sheet). (Fosthiazate)

## 14. DISPOSAL CONSIDERATIONS

### **Waste Disposal**

Pesticide wastes are acutely hazardous. Do not reuse product containers. Dispose product containers, waste containers, residues according local health and environmental regulations.

## 15. TRANSPORT INFORMATION

UN Number: UN 3077

Dangerous Goods Class: 6.1

Packing Group: II

## 16. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## 17. OTHER INFORMATION

The information contained herein relates only to the specific material identified. We believe that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the reliability or completeness of the information. Urge persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

Chico Crop Science Co., Ltd.