

## Material Safety Data Sheet

### Chlorfenapyr 20% + Chlorantraniliprole 10% SC

#### 1. PRODUCT IDENTIFICATION

Product Name: Chlorfenapyr 20% + Chlorantraniliprole 10% SC  
 Common Name: Chlorfenapyr ; Chlorantraniliprole  
 Chemical Family: arylpyrrole (Chlorfenapyr);  
 diamide (Chlorantraniliprole)  
 Chemical Formula: C<sub>15</sub>H<sub>11</sub>BrClF<sub>3</sub>N<sub>2</sub>O (Chlorfenapyr);  
 C<sub>18</sub>H<sub>14</sub>BrCl<sub>2</sub>N<sub>5</sub>O<sub>2</sub> (Chlorantraniliprole);  
 Chemical Name: 4-bromo-2-(4-chlorophenyl)-1-ethoxymethyl-5-trifluoromethyl  
 pyrrole-3-carbonitrile(Chlorfenapyr);  
 3-bromo-N-[4-chloro-2-methyl-6-(methylcarbamoyl)phenyl]-1-(  
 (3-chloropyridin-2-yl)-1H-pyrazole-5-carboxamide;  
 3-bromo-4'-chloro-1-(3-chloro-2-pyridyl)-2'-methyl-6'-(methylc  
 arbamoyl)pyrazole-5-carboxanilide(Chlorantraniliprole);  
 CAS No.: 122453 - 73 - 0 (Chlorfenapyr);  
 500008 - 45 - 7 (Chlorantraniliprole);  
 Product Use: Insecticide

#### 2. COMPANY IDENTIFICATION:

##### Exporter:

CHICO CROP SCIENCE CO., LTD.

Add: Rm 2202, T2, Runhong Building, No. 75 Meiyuan Road, Luohu District,  
 Shenzhen, China.

Tel: 86-755-22969199 Fax: 86-755-25919993

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient Name</u>	<u>CAS Registry Number</u>	<u>Typical Wt. %</u>
Chlorfenapyr	122453 - 73 - 0	20%
Chlorantraniliprole	500008 - 45 - 7	10%
Inert	-	to 100 %

#### 4. HAZARDS IDENTIFICATION

##### HAZARD STATEMENT

Toxic to silkworms and aquatic organisms.

May be harmful if swallowed.

May cause eye and skin irritation.

May cause allergic skin reaction.

##### PRECAUTIONARY STATEMENT

Keep out of reach of children.

Avoid contact with pregnant and lactating women.  
Do not eat, drink or smoke when using this product.  
Wash hands after application.  
Be stored far of the children, food and drinks place.

## 5. FIRST AID MEASURES

If swallowed: Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. The patient should be sent to the hospital for symptomatic treatment with this label immediately.

If in eye: Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If on skin: Wash thoroughly with soap and water. If irritation develops, seek medical attention.

If Inhaled: Keep patient calm, remove to fresh air, and seek medical attention.

Notes to Physician: No special antidotes. Treat them according to their symptoms.

## 6. FIRE FIGHTING MEASURES

### Fire and explosive Properties

Auto-Ignition Temperature	Not available
Flash Point	Not applicable

### Extinguishing Media

Water fog, Carbon Dioxide, Dry Chemical, Foam.

### Fire Fighting Instructions

The product is not flammable. But 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. Firefighting equipment should be thoroughly decontaminated after use. Person who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

## 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, ventilated, rain-proof place. Keep container sealed. Keep away from fire and heat. Keep out of the reach of children and unrelated persons and locked. The storage area shall be provided with suitable materials for leakage.

## 9. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Eye/Face Protection

Goggles and full-face shield should be used when needed to prevent liquid 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:	White
Physical state:	liquid
Odor:	N/A.
pH:	5.0-8.0 (formulation)
Melting point	101-102°C (pure a.i.) (Chlorfenapyr); 208–210°C(tech.,200–202°C) (Chlorantraniliprole)
Boiling point:	N/A(Chlorfenapyr) N/A(Chlorantraniliprole)
Vapor pressure:	$<1.2 \times 10^{-2}$ mPa (20 °C)(Chlorfenapyr) $2.1 \times 10^{-8}$ mPa (25°C, calc.); $6.3 \times 10^{-9}$ mPa (20 °C). (Chlorantraniliprole)
Solubility in water:	In water 0.14 mg/l ( pH7, 25°C). (Chlorfenapyr)

Solubility in organic solvents:	In water 0.9-1.0 mg/l (20 °C). (Chlorantraniliprole) In hexane 0.89, methanol 7.09, acetonitrile 68.4, toluene 75.4, acetone 114, dichloromethane 141 (all in g/100 ml, 25 °C). (Chlorfenapyr) In acetone 3.4, acetonitrile 0.71, dichloromethane 2.48, ethyl acetate 1.14, methanol 1.71 (all in g/l). (Chlorantraniliprole)
Partition coefficient:	$K_{ow} \log P = 4.83$ . (Chlorfenapyr) $K_{ow} \log P = 2.76$ (pH7) (Chlorantraniliprole)

## 11. STABILITY AND REACTIVITY

### Stability

In air, DT50 0.88 d (10.6 h, calc.). In water (direct photodegradation), DT50 4.8 – 7.5 d. Stable to hydrolysis (pH 4, 7 and 9). (Chlorfenapyr)  
In water, DT50 10 d (pH 9, 25 °C). (Chlorantraniliprole)

### Hazardous Polymerization

Does not occur.

### Incompatibility

This product is not compatible with strong acids, strong oxidizing agents.

### Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride.

## 12. TOXICOLOGICAL INFORMATION

Acute oral LD <sub>50</sub> :	Acute oral LD <sub>50</sub> for male rats 441, female rats 1152, male mice 45, female mice 78 mg tech./kg (Chlorfenapyr) Acute oral LD <sub>50</sub> for male and female rats >5000 mg/kg. (Chlorantraniliprole)
Acute dermal LD <sub>50</sub> :	Acute percutaneous LD <sub>50</sub> for rabbits >5000 mg/kg. (Chlorfenapyr) Acute percutaneous LD <sub>50</sub> for male and female rats >5000 mg/kg. (Chlorantraniliprole)
Acute inhalation LC <sub>50</sub> :	LC <sub>50</sub> for rats 1.9 tech./l air. (Chlorfenapyr) LC <sub>50</sub> for male and female rats > 5.1 mg/l. (Chlorantraniliprole)
Irritation:	Moderate eye irritant; non-irritating to skin (rabbits). (Chlorfenapyr) No skin irritation (rabbits). (Chlorantraniliprole)
Sensitization:	N/A(Chlorfenapyr) Not a skin sensitiser (guinea pigs). (Chlorantraniliprole)
Long-term Studies:	Chronic oral toxicity and carcinogenicity NOAEL (80 w)

for male mice 2.8 mg/kg daily (20 ppm); dietary neurotoxicity NOAEL (52 w) for rats 2.6 mg/kg daily (60 ppm). (Chlorfenapyr)

NOAEL (18 mo) for male mice 158 mg/kg b.w. (Chlorantraniliprole)

## 13. ECOTOXICOLOGICAL INFORMATION

The data is from studies conducted on the technical material.

### **Toxicity to bees:**

LD<sub>50</sub> 0.2 µg/bee. (Chlorfenapyr)

LD<sub>50</sub> (oral) >104 µg/bee; (contact) >4 µg/bee. (Chlorantraniliprole)

### **Toxicity to fish and other aquatic organisms:**

LC<sub>50</sub> (48 h) for carp 500 µg/l. LC<sub>50</sub> (96 h) for rainbow trout 7.44, bluegill sunfish 11.6 µg/l. (Chlorfenapyr)

LC<sub>50</sub> (96 h) for rainbow trout >13.8, bluegill sunfish >15.1 mg/l. (Chlorantraniliprole)

### **Toxicity to birds:**

Acute oral LD<sub>50</sub> for mallard ducks 10, bobwhite quail 34 mg/kg. LC<sub>50</sub> (8 d) for mallard ducks 9.4, bobwhite quail 132 ppm. (Chlorfenapyr)

Acute oral LD<sub>50</sub> for bobwhite quail >2250 mg/kg b.w. LC<sub>50</sub> (5 d) for bobwhite quail and mallard ducks >5620 mg/kg diet. (Chlorantraniliprole)

### **Toxicity to earthworms and soil microorganisms:**

NOEC (14 d) for Eisenia foetida 8.4 mg/kg. (Chlorfenapyr)

LC<sub>50</sub> >1000 mg/kg. (Chlorantraniliprole)

### **Toxicity to daphnia:**

LC<sub>50</sub> (96 h) 6.11 µg/l. (Chlorfenapyr)

EC<sub>50</sub> 0.0116 mg/l. (Chlorantraniliprole)

### **Toxicity to algae:**

EC<sub>50</sub> for Selenastrum capricornutum 132 ppb. (Chlorfenapyr)

EC<sub>50</sub> for Selenastrum capricornutum >2 mg/l. (Chlorantraniliprole)

## **Chemical Fate Information**

The data is from studies conducted on the technical material.

### **Animals:**

In rats, >60% of orally administered chlorfenapyr was excreted, primarily through faeces, within 24 hours. The absorbed residues were metabolised via N-dealkylation, dehalogenation, hydroxylation and conjugation. Parent and less polar metabolites were

found in egg, milk and tissues such as fat and liver. Metabolism in hens and goats is similar to that in rats, however, in these species, 80% of orally administered chlorfenapyr was rapidly excreted. Unexcreted residues were present in kidney and liver. At the potential maximum dietary burden, all residues are <0.01 ppm. Chlorfenapyr is the only significant residue component. (Chlorfenapyr)

Extensively metabolised by hydroxylation of the N-methyl group followed by N-demethylation, hydroxylation of the toluene methyl group, and cyclisation with loss of water to form a quinazolinone derivative. (Chlorantraniliprole)

#### **Plants:**

In cotton, citrus, tomato, lettuce and potato, chlorfenapyr is dealkylated to the insecticidally active component (AC 303268) or debrominated to less toxic metabolites. Chlorfenapyr does not translocate out of treated plant parts. Parent compound is the prominent residue. (Chlorfenapyr)

Very little degradation was observed in primary and rotational crops. Unchanged parent chlorantraniliprole was the major identified residue. (Chlorantraniliprole)

#### **Soli/Environment:**

In soil, chlorfenapyr is the major residue. Debromination to a less toxic metabolite is the primary route of degradation; dealkylation is not a primary route of degradation in soil. Koc >10 000 ml/g, indicating chlorfenapyr is likely to be strongly bound in soils. In water, DT50 (direct photodegradation) 4.8 - 7.5 d; stable to hydrolysis at pH 4, 7 and 9. (Chlorfenapyr)

Degrades in the environment with DT50 <2 - 12 mo; shorter half-lives occur with crop cover. Sequestered in soil and so has limited mobility. Degradation is mainly chemical, with a single major degradate which is not active and does not leach. Koc 244 - 464 l/g (EC DAR). (Chlorantraniliprole)

## 14. DISPOSAL CONSIDERATIONS

### **Waste Disposal**

For the packaging container, completely remove the residual agent from the material in the barrel. Landfill or incineration can be used if local authorities permit. Do not reuse empty containers. The residue should be disposed of in strict accordance with the label requirements.

## 15. TRANSPORT INFORMATION

UN Number: NA

Dangerous Goods Class: NA

Packing Group: NA

## 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.