



# MATERIAL SAFETY DATA SHEET

PRODUCT : BULLET 60 EC

EFFECTIVE DATE : March 2015

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**SUPPLIER** : NOVA AGRO (HK) LTD.  
27/F Tesbury Centre  
28 Queen's Road East  
Wanchai  
HONG KONG

## EMERGENCY TELEPHONE NUMBERS

### SPILLAGES:

**Emergency telephone** : (27) 32-946 3472

### POISONINGS:

**National Poison Centre** : (27) 21-9386084 (office hours)  
(South Africa) (27) 21-9316129 (after hours).

## 1. PRODUCT IDENTIFICATION

**Product Name** : BULLET 60 EC

**Active Ingredient (%)** : Acetamiprid 30g/L  
Lambda-cyhalothrin 30g/L

**Chemical Name** : *E*-*N*<sub>1</sub>-[(6-chloro-3-pyridyl)  
methyl]-*N*<sub>2</sub>-cyano-*N*<sub>1</sub>-methyl  
acetamidine

+

[1a(S\*),3a(Z)]-cyano(3-  
phenoxyphenyl) methyl-3-(2-  
chloro-3,3,3-trifluoro-1-  
propenyl)-2,2-dimethyl=  
cyclopropanecarboxylate

**CAS No.** : 135410-20-7  
91465-08-6

**Chemical Class** : Acetamidine + Pyrethroid

## 2. HAZARDS IDENTIFICATION

### Health and Environmental

May cause skin irritation. May cause sensitization by skin contact. Vapours may cause drowsiness and dizziness.

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

### Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

### Physical Properties

Appearance: Off-white liquid

Odour: Slight odor/typical aromatic solvent

### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

## 3. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment.

**Ingestion:** If swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after by a poison control center or doctor. Do not give

**Eye** anything by mouth to an unconscious person.  
**Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Skin**  
**Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

### Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

## 4. FIRE FIGHTING MEASURES

### Fire and Explosion

Autoignition Not Available

Temperature:

Flammability: Not Applicable

### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### In Case of Fire

Use dry chemical, foam or CO<sub>2</sub> extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

## 5. ACCIDENTAL RELEASE MEASURES

### In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in Protective Equipment Section. Cover entire spill with absorbing material and place



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into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

## 6. HANDLING AND STORAGE

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.

## 7. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingestion:** Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

**Eye Contact:** Where eye contact is likely, use chemical splash goggles.

**Skin Contact:** Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear. Stringent housekeeping measures are necessary to prevent translocation of the material from contaminated work surfaces to uncontaminated surfaces (railings, doors, etc.). Unprotected contact with such translocated material can result in paresthesia effects (see Section 11).

**Inhalation:** A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved respirator with any R, P or HE filter.

## 8. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Amber to brown clear liquid  
**Odour:** Slight odor/typical aromatic solvent  
**Melting Point:** Not Applicable  
**Boiling Point:** 100°C  
**Specific Gravity/Density:** 1.04 @ 20°C  
**pH:** 7.3 (1% w/w dilution in deionized water)  
**Solubility in H<sub>2</sub>O** Lambda-cyhalothrin 0.004mg/l

**Vapor Pressure** Lambda-cyhalothrin  
1.5 x 10<sup>(-9)</sup> mmHg @ 20°C

## 9. STABILITY AND REACTIVITY

**Stability:** Stable under normal use and storage conditions.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None known.

**Materials to Avoid:** None known.

**Hazardous Decomposition Products:** May decompose at high temperatures forming toxic gases.

## 10. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies (Finished Product)

**Ingestion:** Practically Non-toxic  
Oral (LD<sub>50</sub> Rat): >5,000 mg/kg

**Dermal:** Slightly Toxic  
Dermal (LD<sub>50</sub> Rat): >2,000 mg/kg

**Inhalation:** Practically Non-Toxic  
Inhalation (LC<sub>50</sub> Rat) : >4.62 mg/l air (4h)

**Eye Contact:** Non-Irritating (Rabbit)

**Skin Contact:** Practically Non-Irritating (Rabbit)

**Skin sensitization** A weak skin sensitizer in animal tests.

## 11. ECOLOGICAL INFORMATION

### Summary of Effects

#### Acetamiprid:

Birds : Slightly toxic. Oral LD<sub>50</sub> value is 180mg/kg for bobwhite quail.

Fish : Low toxicity. LC<sub>50</sub> value for carp is >100 mg/l.

Bees : N.a.

Daphnia : LC50 (3-6h) >1000 mg/l.

Algae : Not available.

Earthworms : Not available.

#### Lambda-cyhalothrin:

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

#### Eco-Acute Toxicity

Lambda-cyhalothrin:  
Fish (Rainbow Trout) 96-hour LC<sub>50</sub> 0.19 ppb  
Fish (Bluegill Sunfish) 96-hour LC<sub>50</sub> 0.21 ppb  
Bird (Mallard Duck) LD<sub>50</sub> Oral > 3950 mg/kg  
Bird (Mallard Duck) 8-day dietary LC<sub>50</sub> > 3948  
Bee (Contact) LD<sub>50</sub> 0.038 ug/bee  
Invertebrate (Water Flea) 48-hour EC<sub>50</sub> 0.04 ppb  
Bird (Bobwhite Quail) 8-day dietary LC<sub>50</sub> > 5300 ppm



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## Eco-Chronic Toxicity

Lambda-cyhalothrin :

Invertebrate (Water Flea) 21-day LOEC 0.0035 ppb

Bird (Mallard Duck) Reproduction 19-week LOEL > 30ppm

Fish (Fathead Minnow) 300-day LOEC 0.062 ppb

## Environmental Fate

Lambda-cyhalothrin:

The information presented here is for the active ingredient, lambda-cyhalothrin.

Not persistent in soil or water. Immobile in soil. Sinks in water (after 24h).

## 12. DISPOSAL CONSIDERATIONS

### Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

## 13. TRANSPORT INFORMATION

### DOT Classification

#### Ground Transport - NAFTA

Containers < 450 liters: Not regulated.

Containers > 450 liters:

**Proper Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Acetamiprid + Lambda-cyhalothrin)

**Hazard Class or Division:** Class 9

**Identification Number:** UN 3082

**Packing Group:** PG III

#### Air Transport - NAFTA

Containers < 450 liters: Not regulated.

Containers > 450 liters: Prohibited.

#### B/L Freight Classification

Insecticides, NOIBN, O/T Poison

#### Comments

#### Water Transport - International

**Proper Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Acetamiprid + Lambda-cyhalothrin), Marine Pollutant

**Hazard Class or Division:** Class 9

**Identification Number:** UN 3082

**Packing Group:** PG III

**IMDG EMS #:** F-A, S-F

#### Air Transport - International

**Proper Shipping Name:** Environmentally Hazardous Substance, Liquid, N.O.S. (Acetamiprid + Lambda-cyhalothrin)

**Hazard Class or Division:** Class 9

**Identification Number:** UN 3082

**Packing Group:** PG III

**Packing Auth.:** 914

**Note:** Max. inner packages 5 liters

Max. single packages 450 liters

## 14. REGULATORY INFORMATION

### EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard  
Chronic Health Hazard

### CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 520 gal. (based on xylene [RQ = 100 lbs.] content in the formulation)

## 15. OTHER INFORMATION

None

## REFERENCES

- *The Pesticide Manual*; 13th Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- *Pestline*: Material Safety Data Sheets for Pesticides and Related Chemicals; Volume II; Occupational Health Services Inc., 1991.
- Florida Agricultural Information Retrieval System: University of Florida.