#### READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT

#### SAFETY PRECAUTIONS

1. Handle with care.

- 2. Wear protective clothing, boots, rubber gloves and face shield when handling the product.
- 3. KEEP OUT OF THE REACH OF CHILDREN.
- 4. KEEP APART FROM FOOD AND FOODSTUFFS.
- 5. KEEP UNDER LOCK AND KEY.
- 6. DO NOT inhale fumes or spray mist.
- 7. Avoid contact with skin and eyes.

8. Prevent spray drift onto other crops, grazing, rivers, dams or other areas not under treatment.

- 9. DO NOT eat, drink or smoke whilst mixing or applying or before washing hands and face and changing clothes.
- 10. Wash contaminated clothing daily.
- 11. Toxic to fish and birds.
- 12. Wash with soap and water after use and accidental skin contact.

13. Clean all equipment thoroughly after use. Dispose of wash water where it will not contaminate crops, grazing, rivers, dams and boreholes.

14. Triple rinse empty containers in the following manner: Rinse the container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the described manner.

15. Destroy the empty container by perforating and flattening and dispose of it in a safe manner.

16. Never re-use the empty container for any other purpose whatsoever.

#### SYMPTOMS OF POISONING

Irritation of skin, eyes, face and mouth. Excessive inhalation may cause nasal and respiratory irritation. Ingestion may cause stomach irritation, nausea, cramps and vomiting.

#### FIRST AID

Inhalation: remove patient to fresh air. Skin contact: remove contaminated clothing and wash patient thoroughly with soap and water. Ingestion: wash out mouth with water. If patient is conscious; induce vomiting by tickling the back of the throat if medical treatment is not readily available and if time from ingestion is less than 1 hour. Eye contamination: wash eye gently with clean running water for 15 to 20 minutes.

#### IN ALL CASES, SEEK MEDICAL ATTENTION AS QUICKLY AS POSSIBLE AND SHOW THIS LABEL TO THE ATTENDING PHYSICIAN.

#### DIRECTIONS FOR USE

BULLET 60 EC is a combination pesticide with both contact and stomach action. It gives rapid knockdown and has a relatively long residual activity. It must be applied as a full cover spray.



mass/volume

Lambda-cyhalothrin: Synthetic pyrethroid

Crop	Pests	Application rate per 100L of water	Remarks
Tomatoes	Aphids, whiteflies, leafminers, thrips	100ml	
Tobacco lands	Cutworm	30ml	Apply 30ml of mixture to each seedling so as to wet stem and soil surrounding the base of the seedling.
	Aphids	30ml	Apply 150L water/ha at 10- 14 day intervals.

#### Pre-harvest intervals: tomatoes 12 days

#### Warranty

The excellent results which this product should normally yield are not however warranted or guaranteed as efficacy can be greatly influenced by factors outside the control of either the manufacturers or suppliers. No warranty whatsoever, express or implied, is therefore given concerning the performance or efficacy of this chemical and responsibility is specifically excluded for any damage, injury or loss of any kind during or resulting from its handling, use or storage. The product is warranted to consist of ingredients as shown on the label.

#### SAFETY PRECAUTIONS

Empty container disposal invert the empty container over the spray tank or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a minimum of 10% of the container. Add the rinsings to the contents of the spray tank. Destroy the empty container by perforation and flattening. Return to supplier for recycling. DO NOT use for any other purpose. Dispose of the wash water at a site for the disposal of pesticides.

Decontamination of sprayer Clean applicator thoroughly after use and ensure that all traces of BULLET 60 EC are removed. Make use of the following method;

- (a) Drain and rinse tank, spray boom and hoses with clean water for at least 10 minutes
- (b) Fill tank with clean water and add it to 1 litre household bleach (5%) or 1.5 Litres of household bleach (3.5%) per 200 Litres of water. Rinse hoses and spray boom and leave in tank for 15 minutes whilst agitating. Drain through nozzle outlets.
- (c) Repeat step (b) and thereafter, rinse thoroughly with clean water and dispose of the wash water at a site designated for the disposal of pesticides.

#### Date of Manufacture: Feb.2019 Batch Number: 20190222

Registration held by: MAGCHEM (PVT) LIMITED, 2274 TILBURY ROAD, WORKINGTON, HARARE, ZIMBABWE

#### Manufactured by: NOVAAGRO(HK)LTD 6THFLOOR,WYNDHAMPLACE, 44WYNDHAMSTREET, CENTRALHONGKONG

# OF THIS SUBSTANCE IS AN OFFENCE.

BULLET 60 EC is a combination insecticide with both contact and

stomach action. It gives rapid knockdown and has a relatively long

residual activity. It must be applied as a full cover spray.

TO CAUSE A HAZARD IN THE USE. STORAGE AND DISPOSAL

CAUTION

HARMFUL IF SWALLOWED

Inert ingredients......940g/L

Chemical groups: Acetamiprid: Neonicotinoid

Composition

1. Tripple rinse clean container after use
2. Puncture holes in bottom
3. Return to Maquires Recycling Facilitator / Return to nearest recycling facility

# **OVA AGRO**

## MATERIAL SAFETY DATA SHEET

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anything by mouth to an unconscious person. If in eyes: Hold eye open and rinse slowly Eve and gently with water for 15-20 minutes. **Contact:** Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Skin If on skin or clothing: Take off contaminated **Contact:** clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. (27) 21-9316129 (after hours). 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<sup>2</sup> 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

#### **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)

## **1. PRODUCT IDENTIFICATION**

: BULLET 60 EC
: Acetamiprid 30g/L
Lambda-cyhalothrin 30g/L
: <i>E</i> )- <i>N</i> <sub>1</sub> -[(6-chloro-3-pyridyl)
methyl]-N2-cyano-N1-methyl
acetamidine
+
[1a(S*),3a(Z)]-cyano(3-
phenoxyphenyl) methyl-3-(2-
chloro-3,3,3-trifluoro-1-
propenyl)-2,2-dimethyl=
cyclopropanecarboxylate
:135410-20-7
91465-08-6
: 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.

If swallowed: Call a poison control center or Ingestion: 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



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.
- Where eye contact is likely, use chemical **Eye Contact:** splash goggles.
- Skin Where contact is likely, wear chemicalresistant (such as nitrile or butyl) gloves, **Contact:** 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).
- A respirator is not normally required when Inhalation: 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 AN	D CHEMICAL PROPERTIES		
Appearance:	Amber to brown clear liquid		
Odour:	Slight odor/typical aromatic solvent		
Melting Point:	Not Applicable		
<b>Boiling Point:</b>	100°C		
Specific	1.04 @ 20°C		
Gravity/Density:			
pH:	7.3 (1% w/w dilution in deionized water)		
Solubility in H <sub>2</sub> O	Lambda-cyhalothrin 0.004mg/l		

## MATERIAL SAFETY DATA SHEET

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

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#### 9. STABILITY AND REACTIVITY

Stability: Stable under normal use and Hazardous **Polymerization: Conditions to Avoid:** Materials to Avoid: Hazardous May Decomposition temperatures **Products:** gases.

storage conditions. Will not occur. None known. None known. decompose high at

forming

toxic

## **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)  $LD_{50}$  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  $LC_{50} > 5300$  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. (Acetamuprid + Lambdacyhalothrin) 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 + Lambdacyhalothrin), 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 + Lambdacyhalothrin) 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.