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Supersedes date (M/D/Y): 2/2/06

Date of MSDS Preparation (M/D/Y): 2/2/09

MSDS prepared by:  
Health, Safety and Environment North America  
Novartis Animal Health Inc.

### SECTION – 1: PRODUCT IDENTIFICATION

**Product Identifier:** AGITA™ Fly Bait Formulation No.: A-12339A  
**Registration Number:** 28297 (Pest Control Products Act)  
**Chemical Class:** Neonicotinoid Insecticide.  
**Synonym:** None

**Active Ingredient (%):** Thiamethoxam (1.0 %) CAS No.: 153719-23-4  
**Chemical Name:** 4H-1,3,5-Oxadiazin-4-imine,3-[(2-chloro-5-thiazolyl) methyl]tetrahydro-5-methyl-N-nitro  
**Product Use:** A sugar-based scatter bait for the control of nuisance flies in and around agricultural buildings.  
For further details please refer to product label.

### SECTION – 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen	WHMIS†
Thiamethoxam (1.0%)	Not Established	Not Established	3 mg/m <sup>3</sup> TWA***	No	Not Established

\*\*\* Syngenta Occupational Exposure Limit (OEL)

† Material listed in Ingredient Disclosure List under Hazardous Products Act.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

### SECTION – 3: HAZARDS IDENTIFICATION

#### Symptoms of Acute Exposure

Hazardous if ingested.

#### Hazardous Decomposition Products

Can decompose at high temperatures and form toxic gases.

#### Physical Properties

Appearance: Yellow granular solid.

Odour: Sweet.

#### Unusual Fire, Explosion and Reactivity Hazards

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

#### Potential Health Effects

**Relevant routes of exposure:** Skin, eyes, mouth.

## SECTION – 4: FIRST AID MEASURES

**IF POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital.** Have the product container, label or Material Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

**EYE CONTACT:** Flush eyes with clean water, holding eyelids apart for a minimum of 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Obtain medical attention immediately if irritation persists.

**SKIN CONTACT:** Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with running water for a minimum of 20 minutes. Obtain medical attention if irritation occurs.

**INHALATION:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is laboured, give oxygen. Obtain immediate medical attention.

**INGESTION:** If swallowed, immediately contact a poison control centre, doctor or nearest hospital for treatment advice. Provided the patient is conscious, wash out mouth with water. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

### NOTES TO PHYSICIAN:

There is no specific antidote. If a large amount has been swallowed and emesis has been inadequate, lavage stomach. A suspension of thirty to fifty grams of activated charcoal can be given for smaller amounts or to absorb the remaining toxicant. Treat symptomatically.

### MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED:

Individuals with allergic history or pre-existing dermatitis should use extra care in handling this product.

## SECTION – 5: FIRE FIGHTING MEASURES

**Flash point and method:** Not available.

**Upper and lower flammable (explosive) limits in air:** Not available.

**Auto-ignition temperature:** Not available.

**Flammability:** Not highly flammable.

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

**Conditions under which flammability could occur:** Product is not flammable. Keep fire exposed containers cool by spraying with water.

**Extinguishing media:** Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist (avoid use of water jet). 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. Contain run-off water with, for example, temporary earth barriers.

**Sensitivity to explosion by mechanical impact:** No.

**Sensitivity to explosion by static discharge:** No.

## SECTION – 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation.

**Procedures for dealing with release or spill:** 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 outlined in Sections 7 and 8. Scoop or sweep up material, keeping dust to a minimum, and place into a disposable container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, skim off the upper contaminated layer and collect for disposal. Once all material is

cleaned up and placed in a disposal container, seal container and arrange for disposition. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

## SECTION – 7: HANDLING AND STORAGE

**Handling practices:** KEEP OUT OF REACH OF CHILDREN and animals. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. After work, rinse gloves and remove protective equipment. Wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Keep product, wash or rinse water, and contaminated materials out of water, away from crops, and away from access by people, animals and birds.

**Appropriate storage practices/requirements:** Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 30 °C. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

**National Fire Code classification:** Not required.

## SECTION – 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Applicable control measures, including engineering controls:** This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

### **Personal protective equipment for each exposure route:**

General: Avoid breathing dust, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

**INGESTION:** Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.

**EYES:** Where eye contact is likely, wear chemical goggles or a full-face shield.

**SKIN:** 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.

**INHALATION:** A respirator is not normally required when handling this substance. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapour cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

## SECTION – 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Yellow granular solid.

**Formulation Type:** Granules.

**Odour:** Sweet.

**pH:** 5.5 – 8.5 (1% aqueous solution).

**Vapour pressure and reference temperature:**  $2 \times 10^{-11}$  mmHg @ 20 °C (Thiamethoxam Technical).

**Vapour density:** Not available.

**Boiling point:** Not available.

**Melting point:** Not available.

**Freezing point:** Not available.

**Specific gravity or density:** 0.5 – 0.7 g/cm<sup>3</sup> @ 20 °C.

**Evaporation Rate:** Not available.  
**Water/oil partition coefficient:** Not available.  
**Odour threshold:** Not available.  
**Viscosity:** Not available.  
**Solubility in Water:** 4.1 g/L @ 25 °C (Thiamethoxam Technical).

## SECTION – 10: STABILITY AND REACTIVITY

**Chemical stability:** Stable under normal use and storage conditions.  
**Conditions to avoid:** Excessive heat or cold. Avoid temperatures above 30 °C.  
**Incompatibility with other materials:** None known.  
**Hazardous decomposition products:** Can decompose at high temperatures and form toxic gases.  
**Hazardous polymerization:** Will not occur.

## SECTION – 11: TOXICOLOGICAL INFORMATION

### **Acute toxicity/Irritation Studies (Finished Product):**

Ingestion:	<u>Practically Non-Toxic</u> Oral (LD50 Rat):	> 5,000 mg/kg body weight
Dermal:	<u>Practically Non-Toxic</u> Dermal (LD50 Rat):	> 2,000 mg/kg body weight
Inhalation:	<u>Practically Non-Toxic</u> Inhalation (LC50 Rat):	Not Available.
Eye Contact:	<u>Non-Irritating (Rabbit)</u>	
Skin Contact:	<u>Slightly Irritating (Rabbit)</u>	
Skin Sensitization:	<u>Not a Sensitizer (Guinea Pig)</u>	

### **Reproductive/Developmental Effects**

Thiamethoxam Technical: Developmental: Not teratogenic. Developmental delays at maternally toxic doses.  
Reproductive: No biologically important reproductive effects. Minor testis effects at high doses with no effect on reproduction.

### **Chronic/Subchronic Toxicity Studies**

Thiamethoxam Technical: Subchronic: Predominantly liver and kidney effects at high doses. Not neurotoxic.  
Chronic: Predominantly liver and kidney effects at high doses.  
Acute: Transient clinical signs at high doses. No changes to nervous tissue.

### **Carcinogenicity**

Thiamethoxam Technical: Liver tumors at high doses noted in mice that are not relevant to humans. No treatment-related tumors in rats.

### **Other Toxicity Information:**

None.

### **Toxicity of Other Components**

The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the “other components” in the formulation.

**Other materials that show synergistic toxic effects together with the product:** None known.

## Target Organs

### Active Ingredients

Thiamethoxam Technical: Liver, kidney.

### Inert Ingredients

Not Applicable

## SECTION – 12: ECOLOGICAL INFORMATION

### Summary of Effects

The active ingredient, thiamethoxam, is slightly to practically non-toxic to fish, birds and aquatic invertebrates (water flea) but is highly toxic to the honeybee and one species of aquatic invertebrate (chironomid). However, exposure and risk to non-target species to thiamethoxam is minimal and acceptable based on the low application rates and application methodologies.

### Eco-Acute Toxicity

Thiamethoxam Technical:

Bees LC <sub>50</sub> /EC <sub>50</sub>	0.024 µg/bee
Invertebrates ( <i>Daphnia magna</i> ) 48-hour LC <sub>50</sub> /EC <sub>50</sub>	>100 ppm
Invertebrates (Chironomid) 48-hour LC <sub>50</sub> /EC <sub>50</sub>	0.035 ppm
Fish (Rainbow Trout) 96-hour LC <sub>50</sub> /EC <sub>50</sub>	> 100 ppm
Fish (Bluegill) 96-hour LC <sub>50</sub> /EC <sub>50</sub>	> 114 ppm
Birds (8-day dietary - Bobwhite Quail) LC <sub>50</sub> /EC <sub>50</sub>	> 5,200 ppm
Birds (8-day dietary - Mallard Duck) LC <sub>50</sub> /EC <sub>50</sub>	> 5,200 ppm
Bobwhite Oral LD <sub>50</sub>	1,552 mg/kg
Mallard Oral LD <sub>50</sub>	576 mg/kg

### Eco-Chronic Toxicity

Thiamethoxam Technical:

Fish (Fathead minnow) Early Life NOEC	> 20 mg/L
Invertebrate ( <i>Daphnia magna</i> ) Life Cycle NOEC	> 100 mg/L
Invertebrate (Chironomid) Life Cycle NOEC	0.010 mg/L
Mallard Reproduction NOEC	300 ppm
Bobwhite Reproduction NOEC	900 ppm

### Environmental Fate

The active ingredient, thiamethoxam, has a moderate bioaccumulation potential, low mobility, and moderate persistence in soil and water. The dissipation half-life in soil is 294-353 days. The main route of degradation is by microbial degradation and formation of bound residues.

## SECTION – 13: DISPOSAL CONSIDERATIONS

**Waste disposal information:** Do not reuse empty containers. Empty container retains product residue. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

## SECTION – 14 : TRANSPORT INFORMATION

### Shipping information such as shipping classification:

TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL  
Not Regulated.

IATA CLASSIFICATION - AIR  
Not Regulated.

## SECTION – 15: REGULATORY INFORMATION

**WHMIS classification for product:** Exempt

**A statement that the MSDS has been prepared to meet WHMIS requirements, except for use of the 16 headings.**

This MSDS has been prepared in accordance with WHMIS requirements, but the data are presented under 16 headings.

Other regulations; restrictions and prohibitions

Pest Control Products (PCP) Act Registration No.: 28297

## SECTION – 16: OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Novartis will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

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