MATERIAL SAFETY DATA SHEET

Engage Agro Corporation 1030 Gordon Street Guelph, ON N1G 4X5

Tel. Office (519) 826-7878 **Tel. Emergency: 1-866-336-2983**

Date of MSDS Preparation (Y/M/D): 2014-01-13 Supersedes date (Y/M/D): n/a

SECTION – 1: PRODUCT IDENTIFICATION

Product Identifier: ASSAIL 70WP Insecticide						
		Registration Number:	27128 (Pest Control Products Act)			
		Synonym:	acetamiprid			
Emergency Telephone Number – 1-800-424-9300		umber – 1-800-424-9300				
Distributer – 1	Engage	Agro Corporation.				
1	1030 Go	ordon St.				
Guelph, ON, N1G 4X5						
519-826-7878						
Manufacturer – Nippon Soda Co., Ltd.						
2-1,2 Chome Ohtemachi, Chiyoda-Ku						
Tokyo 100-8165, Japan						
Active Ingredient	t(%):	Acetamiprid (70%)	CAS No.: 135410-20-7			
Chemical Name:		(E)-N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-N1-methylacetamidine				
Product Use:		Wettable powder insecticide for insect control in agricultural crops. For further details please				
		refer to product label.				
Name and Telephone Number of Party Responsible for MSDS Preparation:						
Engage Ages of 510,826 7079						

Engage Agro Corporation. For further information please contact Engage Agro at 519-826-7878.

SECTION - 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Material	CAS Number	%
Acetamiprid	135410-20-7	70.0 WT%
(E)-N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-N1-		
methylacetamidine		
Inert Ingredients Including		30 WT%
Amorphous Silicon Dioxide Hydrate	112926-00-8	
(Amorphous Silica)		
Hydrous Aluminum Silicate	1332-58-7	

SECTION – 3: HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Harmful if inhaled or absorbed through the skin. Avoid breathing vapors or spray mist. Avoid contact with eyes, skin or clothing. Keep out of reach of children and domestic animals.

Potential Health Effects

Eye contact with Assail may cause eye irritation. Prolonged contact may cause tearing, pain or blurred vision.

Skin contact with Assail may cause skin irritation. Prolonged contact may cause discomfort or rash and skin permeation may occur in amounts capable of producing the effects of systemic toxicity.

ASSAIL PAGE 1 OF 6

Inhalation may cause irritation of the upper respiratory passages. Prolonged contact may cause coughing and discomfort.

Inhalation of the product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

SECTION – 4: FIRST AID MEASURES

IF SWALLOWED: Immediately call poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by the poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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.

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 treatment advice.

For **MEDICAL EMERGENCIES** Call 24 Hours a day toll-free 1-800-424-9300. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Notes to Physicians

There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

SECTION – 5: FIRE FIGHTING MEASURES

Flammable Properties

Like all organic and most dry chemicals, as a powder or dust, this product (when mixed with air in critical proportions and in the presence of an ignition source) may present an explosion hazard.

Will form dust explosive mixtures in air. Dust explosive rating of ST-1 (KsT = 165 bar-meter per second).

Flash Point: Not Applicable

Extinguishing Media

Dry chemical, alcohol foam, water spray, carbon dioxide (CO2).

Fire Fighting Instructions

Firefighters should wear NIOSH/OSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind if possible. Keep out of low areas. Persons 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.

ASSAIL PAGE 2 OF 6

SECTION - 6: ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with cleanup. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Evacuate personnel. Wear self-contained breathing apparatus (SCBA) and full protective gear.

<u>Emergency Response</u> - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use NIOSH approved respirator protection.

Evacuation Procedures and Safety: Personnel handling this material should be thoroughly trained to handle spills and releases. Wear appropriate gear for the situation. See Personal Protection Information Section.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas. Dike spill with earth or sand. Follow applicable Federal, State/Provincial and Local laws/ regulations.

Containment of Spill - Stop leak if it can be done without risk. Follow procedure under Cleanup and Disposal of Spill.

Spill Clean Up

Avoid causing dust. Shovel, vacuum or scoop up to a metal drum for disposal. If liquid, dike and allow to solidify or soak up with sand. All flushing and clean-up residuals should be collected for proper disposal to prevent soil and surface, ground and sewer water contamination. Do not allow to contaminate ground or surface water systems.

<u>Cleanup and Disposal of Spill</u> - Sweep up and place in an appropriate closed container. No sparking tools should be used. Avoid creation of dusty conditions. Clean up residual material by washing area with water and detergent. Collect washings for disposal. Decontaminate tools and equipment following cleanup.

Accidental Release Measures

Environmental and Regulatory Reporting: Do not flush to drain. If spilled on the ground the affected area should be scraped clean and placed in an appropriate container for disposal. Prevent material from entering public sewer system or any waterways.

SECTION – 7: HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Avoid breathing dust. Wash thoroughly after handling.

USERS SHOULD:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Handling (Physical Aspects)

THIS PRODUCT MAY PRESENT A DUST EXPLOSION HAZARD.

Dry powders can build static electricity charges when subjected to the friction of conveying, mixing or sliding. Provide adequate precautions, such as electrical grounding, or inert atmospheres when material is used in the presence of flammable materials to prevent ignition.

It is recommended that all dust control equipment and material transport systems involved in handling of this product contain explosion relief vents or explosion suppression system or an oxygen deficient environment. In addition, all conductive elements of the system that contact this material should be electrically bonded and grounded. This powder should not be flowed through non-conductive ducts or pipes. Use only appropriately classed electrical equipment.

Storage

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. Keep away from heat, sparks and flames.

Do not store in or around the home. Store unused product in a cool, ventilated, dry locked area. Do not allow prolonged storage in areas where temperatures frequently exceed 115°F (46°C). NEVER TRANSFER THIS PRODUCT TO ANOTHER CONTAINER FOR STORAGE.

Min/Max Storage Temperatures: Min Temp: No data Max Temp: 46°C

SECTION - 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

Personal Protective Equipment

Workers must wear long-sleeved shirt, long pants, chemical-resistant gloves, and socks plus shoes, when mixing, loading, applying, and for clean-up and repair.

Exposure Guidelines

Applicable Exposure Limits

Amorphous Silicon Dioxide Hydrate PEL (OSHA) : 80 mg/m3 / % SiO2 - 8 Hr TWA

Hydrous Aluminum Silicate PEL (OSHA) : 15 mg/m3, total dust, 8 Hr. TWA 5 mg/m3, respirable dust, 8 Hr. TWA TLV (ACGIH) : 2 mg/m3, respirable dust, 8 Hr. TWA, A4

SECTION - 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: off-white powder Physical State: solid Odor: no odor determined pH: 8.5-9.5 at 1 wt/wt% dilution in water at 22°C Vapor Density: (air = 1) not available Density: 13-17 lb/cu ft (loose) Boiling Point: not available

SECTION – 10: STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions as described in the Handling and Storage Section.

Conditions to Avoid: None known

Incompatibility with Other Materials: Strong bases, strong acids and strong oxidizing agents

Polymerization: Polymerization will not occur.

SECTION - 11: TOXICOLOGICAL INFORMATION

Acute toxicity/Irritation Studies (Finished Product):

Ingestion:	Slightly Acutely Toxic	
	Oral (LD_{50} Rat):	1064 mg/kg body weight
D 1		
Dermal:	Slightly Acutely Toxic	
	Dermal (LD ₅₀ Rabbit):	>2000 mg/kg body weight
Tulu 1. Car		
Inhalation:	Slightly Acutely Toxic	
	Inhalation 4 hours (LC ₅₀ Rat):	2.88 mg/L in rats

This material is a slight skin irritant, and a mild eye irritant, but is not a skin sensitizer in animal tests.

In long term animal feeding studies there was no evidence of carcinogenicity. Not considered a carcinogen or mutagen. In reproductive and developmental studies in animals, there was no effect on reproduction. Not considered a reproductive toxicant.

Assessment Carcinogenicity

ACGIH Hydrous aluminum silicate	1332-58-7	Group A4
NTP None		
IARC Amorphous silicon dioxide hydrate (Amorphous silica)	1129	26-00-8
OSHA		

SECTION - 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: No information is available.

SECTION – 13: DISPOSAL CONSIDERATIONS

Waste Disposal

None

Do not contaminate water, food, or feed by disposal. Contamination with this product will render water, food, or feed unfit for human or animal consumption. Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

ENVIRONMENTAL HAZARDS

This product is toxic to wildlife. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treated area. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not contaminate water used for irrigation or domestic purposes.

Container Disposal

DO NOT reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

SECTION - 14 : TRANSPORT INFORMATION

Shipping information such as shipping classification:

DOT/IMO

Proper Shipping Name: NOT REGULATED

Not regulated for transportation per DOT regulations.

SECTION – 15: REGULATORY INFORMATION

WHMIS classification for product: Exempt

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

Pest Control Products (PCP) Act Registration No.: 27128

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 Engage Agro 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.

Prepared by: Engage Agro Corporation, Inc.