1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Hi-Yield® Grub Free Zone II  
EPA No.: 42750-154-7401

COMPANY IDENTIFICATION:  
Voluntary Purchasing Groups, Inc.  
230 FM 87  
Bonham, TX. 75418

Chemical Family: Chloronicotinyl Insecticide  
Chemical Name: 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine

2. COMPOSITION / INFORMATION ON INGREDIENTS:

Imidacloprid CAS#138261-41-3 0.2%

3. HAZARDS IDENTIFICATION SUMMARY:

HEALTH HAZARDS: Mildly irritating to the eyes and skin. May be harmful if swallowed.  
PHYSICAL HAZARDS: Can decompose at high temperatures releasing toxic gases.  
environmental hazards: Extremely toxic to fish, water organisms and bees. Keep out of waterways.

4. FIRST AID MEASURES:

IF SWALLOWED: Call physician or Poison Control Center immediately. Drink 1 to 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.  
IF IN EYES: Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation persists.  
IF ON SKIN: Remove contaminated clothing. Wash skin with plenty of soap and water. Get medical attention if irritation persists.  
NOTE TO PHYSICIAN: No specific antidote available, treat symptomatically.

Have the product container or label with you when calling poison control center or doctor, or going for treatment.

5. FIRE AND EXPLOSION DATA:

FLASH POINT: Will not flash.  
FLAMMABLE LIMITS IN AIR:  
LFL: Unknown  
UFL: Unknown  
FIRE AND EXPLOSION HAZARD: Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.  
EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.  
FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off.
Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece.

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen cyanide, Hydrogen chloride, Carbon monoxide, Nitrogen oxides.

### 6. ACCIDENTAL RELEASE MEASURES:

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Vacuum or sweep up material and place in a container for reuse or disposal.

**LARGE SPILL:** Avoid creating dust cloud. Vacuum or sweep up material and place in a container for reuse or disposal. Reduce airborne dust and prevent scattering by moistening with water. Pick up wash liquid with additional absorbent and place in a disposable container. After removal, flush contaminated area thoroughly with water.

This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

### 7. HANDLING AND STORAGE:

**KEEP OUT OF REACH OF CHILDREN!**

**HANDLING:** Use only in a well-ventilated area. Minimize dust generation and accumulation.

**STORAGE:** Keep container closed when not in use. Keep away from food, feed and drinking water. Store in a well ventilated dry place away from heat.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

**EXPOSURE LIMITS (8 HOUR TWA):** (Refer to Section 3)

**ENGINEERING CONTROLS:** Proper ventilation is required when handling or using this product to keep exposure below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYE PROTECTION:** Safety goggles.

**CLOTHING:** Long-sleeved shirt and long pants, shoes plus socks.

**GLOVES:** Chemical-resistant gloves, made of any waterproof material.

**RESPIRATOR:** Not required when handled under normal conditions. When handling in enclosed areas with inadequate ventilation, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

Follow manufacturer’s instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately for other laundry.

**USER SAFETY RECOMMENDATIONS:**

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**PHYSICAL DESCRIPTION:** Gray powder.
MATERIAL SAFETY DATA SHEET

Hi-Yield® Grub Free Zone II

Effective Date: April 18, 2012

ODOR: No appreciable odor.
BULK DENSITY: 30-50 lb/cu.ft.
PH: 7.5
WATER SOLUBILITY: Insoluble

10. STABILITY AND REACTIVITY:

CHEMICAL STABILITY: Stable, however may decompose if heated.
CONDITIONS TO AVOID: Avoid temperatures above 100°F (38°C) for prolonged period of time. Strong exothermal reaction can occur above 390°F (200°C).
INCOMPATIBILITY WITH OTHER MATERIALS: None known.
HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, Oxides of nitrogen and carbon.
HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION:

ACUTE TOXICITY:
Oral LD$_{50}$ (rat) - >4,500 mg/Kg
Dermal LD$_{50}$ (rat) - >2,000 mg/Kg
Inhalation LC$_{50}$ (rat) - >5.0 mg/L
Eye Irritation (rabbit) - Mild
Skin Irritation (rabbit) - Slight
Sensitization (guinea pig) - Non-sensitizer

CARCINOGEN STATUS:
OSHA - Not listed
NTP - Not listed
IARC - Not listed

MUTAGENIC DATA: Little or no evidence of mutagenic effects during in vivo or in vitro studies.
ADDITIONAL DATA: No reproductive or teratogenic (birth defect) effects at normal exposure levels.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL SUMMARY: This product is highly toxic to aquatic invertebrates. Keep out of water bodies. Extremely toxic to bees by direct exposure or residues on treated crop. Do not apply to or allow drift on blooming crops that bees may visit.

FISH TOXICITY: (Technical)
96 hour LC$_{50}$, Rainbow trout – 211 mg/L
96 hour LC$_{50}$, Bluegill – unknown

AVIAN TOXICITY: (Technical)
Oral LD$_{50}$, Bobwhite quail – 152 mg/Kg
Oral LD$_{50}$, Mallard duck – unknown

BEE TOXICITY:
Contact LD$_{50}$ – Highly toxic
13. DISPOSAL CONSIDERATIONS:

WASTE: Pesticides wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations.

CONTAINER: Completely empty container into processing equipment. Then dispose of empty container in sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORTATION INFORMATION:

DOT SHIPPING DESCRIPTION: Not regulated by DOT

DOT HAZARD CLASS: N/A
UN NUMBER: N/A
DOT PACKAGING GROUP: N/A
DOT PRIMARY/SECONDARY LABEL: N/A
DOT PRIMARY/SECONDARY PLACARD: N/A
DOT EMERGENCY RESPONSE GUIDE #: N/A

15. REGULATORY INFORMATION:

CERCLA REPORTABLE QUANTITY: Not listed

SARA TITLE III STATUS:
311/312 Hazard Categories: Immediate Health Hazard
313 Toxic Chemicals: None known

CALIFORNIA PROP 65: Not listed

16. OTHER INFORMATION:

The information contained within was obtained from authoritative sources and is believed to be accurate for the manner in which the product is intended to be used. Other uses could result in ramifications, which are not included within this document.