SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: PROVADO® 1.6 FLOWABLE INSECTICIDE
MSDS Number: 102000007317
EPA Registration No.: 264-763

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name | CAS-No. | Average % by Weight
Imidacloprid | 138261-41-3 | 17.40

Trade Secret Ingredient(s)

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Caution! Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes and clothing.

Physical State: viscous liquid
Odor: mild
Appearance: off-white
Routes of Exposure: Ingestion, Eye contact, Skin Absorption, Inhalation

Immediate Effects:
- **Eye**: May cause mild irritation to eyes. Avoid contact with eyes.
- **Skin**: May be harmful if absorbed through skin. Avoid contact with skin and clothing.
- **Ingestion**: Harmful if swallowed. Do not take internally.
- **Inhalation**: Avoid inhalation of vapour or mist.

Chronic or Delayed Long-Term: This product or its components may have target organ effects.
Potential Environmental Effect

Highly toxic to bees. Highly toxic to aquatic invertebrates.

SECTION 4. FIRST AID MEASURES

General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye
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 physician or poison control center immediately.

Skin
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation
Move 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 physician or poison control center immediately.

Notes to Physician Treatment
There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash point
> 93.4 °C / > 200.1 °F

Suitable Extinguishing Media
Water, Carbon dioxide (CO2), Dry chemical, Foam

Fire Fighting Instructions
Keep out of smoke. Fight fire from upwind position. Cool closed containers/tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES
Personal Precautions
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for Cleaning Up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice
Use personal protective equipment.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.

Min/Max Storage Temperatures
Recommended maximum transport/storage temperature: 38 °C / 100 °F
The 30-day storage temperature average must not exceed the recommended maximum.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

Eye/Face Protection
Goggles

Hand Protection
Chemical-resistant gloves made of waterproof material such as neoprene, butyl rubber, barrier laminate or nitrile rubber.

Body Protection
Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory Protection
When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the
Exposure Limits

This product contains material which are Trade Secret and may have Occupational Exposure Limits.

Imidacloprid 138261-41-3 OES BCS* 0.7 mg/m3

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  off-white

Physical State  viscous liquid

Odor  mild

pH  7.4 (1 %) aqueous suspension

Density  1.10 g/cm³ at 20 °C

Viscosity  550 - 750 mPa.s

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid  Heat, flames and sparks.

Hazardous Decomposition Products  Thermal decomposition can lead to release of:
  Hydrogen chloride (HCl)
  Hydrogen cyanide (hydrocyanic acid)
  Nitrogen oxides (NOx)
  Carbon monoxide

Hazardous Reactions  Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity data have been bridged from a similar formulation containing a higher percentage of the active ingredient, imidacloprid. The non-acute information pertains to the technical-grade active ingredient.

Acute Oral Toxicity  male rat: LD50: > 4,870 mg/kg
  female rat: LD50: 4,143 mg/kg
Acute Dermal Toxicity  
male/female combined rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity  
male/female combined rat: LC50: > 5.3 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
(actual)

male/female combined rat: LC50: > 20 mg/l  
Exposure time: 1 h  
Determined in the form of liquid aerosol.  
Extrapolated from the 4 hr LC50.  
(actual)

Skin Irritation  
rabbit: No skin irritation.

Eye Irritation  
rabbit: Minimally irritating.

Sensitization  
guinea pig: Non-sensitizing.

Chronic Toxicity  
Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

Assessment Carcinogenicity  
Imidacloprid was not carcinogenic in studies in rats and mice.

ACGIH  
None.

NTP  
None.

IARC  
None.

OSHA  
None.

Reproductive & Developmental Toxicity  
REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY: Imidacloprid is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Neurotoxicity  
Imidacloprid showed slight behavioral and activity changes only at the highest dose tested in neurotoxicity studies in rats. There were no correlating morphological changes observed in the neural tissues.

Mutagenicity  
Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
### Environmental Precautions
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 surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Do not allow to get into surface water, drains and ground water.

### SECTION 13. DISPOSAL CONSIDERATIONS

| General Disposal Guidance | Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility. |
| Container Disposal | Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke. |

### SECTION 14. TRANSPORT INFORMATION

**TRANSPORTATION CLASSIFICATION:**
Not regulated for Domestic Surface Shipment

**FREIGHT CLASSIFICATION:**
Insecticides or Fungicides, N.O.I.; other than poison

### SECTION 15. REGULATORY INFORMATION

This product contains material(s) which are Trade Secret and are on various Regulatory Lists. These material(s) are not listed below.

**EPA Registration No.** 264-763

**US Federal Regulations**

- **TSCA list**
  None.
- **US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**
  None.
- **SARA Title III - Section 302 - Notification and Information**
  None.
- **SARA Title III - Section 313 - Toxic Chemical Release Reporting**
  None.

**US States Regulatory Reporting**

- **CA Prop65**
  This product does not contain any substances known to the State of California to cause cancer.
This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**
None.

**Canadian Regulations**

**Canadian Domestic Substance List**
None.

**Environmental**

**CERCLA**
None.

**Clean Water Section 307 Priority Pollutants**
None.

**Safe Drinking Water Act Maximum Contaminant Levels**
None.

### SECTION 16. OTHER INFORMATION

**NFPA 704 (National Fire Protection Association):**

- **Health:** 1
- **Flammability:** 1
- **Reactivity:** 1
- **Others:** none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated for general editorial purposes.

Revision Date: 05/20/2008

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