Bayer Advanced Lawn Complete Insect Killer For Soil & Turf Ready-to-Spread Granules

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Bayer Advanced Lawn Complete Insect Killer For Soil &amp; Turf Ready-to-Spread Granules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Imidacloprid Technical, Beta-cyfluthrin Technical, Wood Dust</td>
</tr>
<tr>
<td>Common Name</td>
<td></td>
</tr>
<tr>
<td>MSDS Number</td>
<td>2019</td>
</tr>
<tr>
<td>Chemical Family</td>
<td></td>
</tr>
<tr>
<td>Chemical Formulation</td>
<td></td>
</tr>
</tbody>
</table>

Bayer Environmental Science
95 Chestnut Ridge Road
Montvale, NJ 07645
USA

For MEDICAL, TRANSPORTATION or Other EMERGENCY call 1-800-334-7577 24 hours/day
For Product Information call 1-800-331-2867

Product Use Description
Insecticide, for use on: Lawns, Ground Cover, Flower Beds, Around Trees & Shrubs, and Around Homes

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS No.</th>
<th>Concentration % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid Technical</td>
<td>138261-41-3</td>
<td>0.1200 - 0.1800</td>
</tr>
<tr>
<td>Beta-cyfluthrin Technical</td>
<td>68359-37-5</td>
<td>0.0400 - 0.0600</td>
</tr>
<tr>
<td>Wood Dust</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview
Caution! Harmful if swallowed, inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

Physical State
Solid
Granular

Appearance
Brown

Routes of Exposure
Ingestion, inhalation and skin contact.

Immediate Effects
Eye
Causes moderate eye irritation. Avoid contact with eyes.

Skin
Non-irritating.

Ingestion
Harmful if swallowed. Do not take internally.

Inhalation
Harmful if inhaled. Avoid breathing dust.

SECTION 4. FIRST AID MEASURES

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 poison control center or doctor for treatment advice.

Skin
Seek medical attention if irritation develops or persists.

Ingestion
Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation
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.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point
Not applicable

Suitable Extinguishing
Water, Foam, Dry chemical
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Media

| Fire Fighting Instructions | Keep out of smoke. Cool exposed containers with water spray. Wear full protective clothing and self-contained breathing apparatus. Contain runoff to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

| General and Disposal | Keep unnecessary people away, isolate hazard area and deny entry. Do not walk through spilled material. |
| Land Spill or Leaks | Avoid generating dust (a fine water spray mist, plastic film cover, or floor sweeping compound may be used if necessary). Avoid breathing dusts and skin contact. Use recommended protective equipment while carefully sweeping up spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways. |

SECTION 7. HANDLING AND STORAGE

| Handling Procedures | Food utensils such as teaspoons or measuring cups must not be used for food purposes after use in measuring pesticides. |
| Storing Procedures | Store in a cool, dry area. Store in original container and out of the reach of children, preferably in a locked storage area. |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| General Protection | There are no known hazards associated with this product when used according to the label directions. At the same time, the following guidelines should be used: Avoid breathing dust. Avoid contact with skin and eyes. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Do not allow children or pets on treated area until it has been watered and allowed to dry. |

Exposure Limits

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Wood Dust

<table>
<thead>
<tr>
<th>Source</th>
<th>TWA</th>
<th>Form of Exposure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td>Dust.</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>ACGIH</td>
<td></td>
<td>Dust.</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>ACGIH</td>
<td>STEL</td>
<td>Dust.</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>ACGIH NIC</td>
<td>TWA</td>
<td>Inhalable fraction.</td>
<td>0.5 mg/m³</td>
</tr>
<tr>
<td>ACGIH NIC</td>
<td>TWA</td>
<td>Inhalable fraction.</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>NIOSH</td>
<td>REL</td>
<td>Dust.</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>OSHA Z1A</td>
<td>TWA</td>
<td>Dust.</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>OSHA Z1A</td>
<td>TWA</td>
<td>Dust.</td>
<td>2.5 mg/m³</td>
</tr>
<tr>
<td>OSHA Z1A</td>
<td>STEL</td>
<td>Dust.</td>
<td>10 mg/m³</td>
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</table>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Brown</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid Granular</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 - 7.4 at (5% aqueous suspension) at 25 °C</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

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Bulk Density 40 - 60 lb./cu. ft.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability This material is stable under normal handling and storage conditions described in Section 7.

SECTION 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Acute Oral Toxicity</th>
<th>Male and Female Rat: LD50: &gt; 2,000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Dermal Toxicity</td>
<td>Male and Female Rat: LD50: &gt; 4,000 mg/kg</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity</td>
<td>Male and Female Rat: LC50: 4-hr exposure to liquid aerosol: &gt; 1.2 mg/l Maximum attainable concentration. (actual) Male and Female Rat: 1-hr exposure to liquid aerosol (extrapolated from 4-hr LC50): &gt; 4.8 mg/l (actual)</td>
</tr>
</tbody>
</table>

Skin Irritation Rabbit: Non-irritating.

Eye Irritation Rabbit: Non-irritating.

Sensitization Guinea pig: Not a dermal sensitizer.

Acute toxicity studies for this product have been bridged from another product containing a higher percentage of the active ingredients Beta-cyfluthrin (1.35%), an enriched isomer mixture of Cyfluthrin and Imidacloprid (10%). The non-acute information pertains to the active ingredients, Beta-cyrluthrin technical, Cyfluthrin technical, and Imidacloprid technical. Toxicology information on Cyfluthrin technical can be obtained by calling the Product Use Information Number on page 1.

Sub-Chronic Toxicity BETA-CYFLUTHRIN TECHNICAL

In a subchronic dietary study, dogs treated with beta-cyfluthrin, exhibited vomiting, diarrhea, decreased body weight gain and clinical neurological symptoms at the highest dose level (360 ppm).

In a subchronic dietary study in rats treated with beta-cyfluthrin, effects included reduced body weight gains and feed consumption, uncoordinated gait, and skin injuries of the neck and head from excessive preening due to the local irritant effect of the test material.

In a 4-week inhalation study in rats exposed to beta-cyfluthrin, effects observed included ungroomed fur, piloerection, hyper- and hypoactivity, reduced body weight gains, hematological changes and reduced organ weights (thymus, spleen).
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IMIDACLOPRID TECHNICAL
In a 3-week dermal toxicity study, rabbits treated with imidacloprid showed no local or systemic effects at levels up to and including 1000 mg/kg, the limit dose.

In a 4-week inhalation study, rats exposed to high concentrations of imidacloprid exhibited decreased body weight gains and changes in clinical chemistries and organ weights.

Chronic Toxicity
IMIDACLOPRID TECHNICAL
In chronic dietary studies in rats and dogs exposed to imidacloprid, the target organs were the thyroids and/or liver.

Assessment Carcinogenicity
IMIDACLOPRID TECHNICAL
In oncogenicity studies in rats and mice, imidacloprid was not considered carcinogenic in either species.

ACGIH
Wood Dust Group A1

NTP
Wood Dust

IARC
Wood Dust 1

OSHA
None

Reproductive & Developmental Toxicity
BETA-CYFLUTHRIN TECHNICAL
DEVELOPMENTAL TOXICITY: In an oral developmental toxicity study in rats treated with beta cyfluthrin, decreased fetal body weights and an increased incidence of skeletal findings were observed at the maternally toxic and lethal high dose level (40 mg/kg).

IMIDACLOPRID TECHNICAL
DEVELOPMENTAL TOXICITY: In developmental toxicity studies in rats and rabbits, there was no evidence of an embryotoxic or teratogenic potential for imidacloprid. In both species, developmental effects were observed only at high doses and in conjunction with maternal toxicity.

REPRODUCTION: In a two-generation reproduction study in rats, imidacloprid was not a primary reproductive toxicant. Offspring exhibited reduced body weights at the high dose and in conjunction with maternal toxicity.

Neurotoxicity
BETA-CYFLUTHRIN TECHNICAL
In acute and subchronic neurotoxicity screening studies in rats, beta-cyfluthrin produced slight transient neurobehavioral effects in each study at the highest dose tested. There were no correlating morphological changes in neural tissues in either study.

IMIDACLOPRID TECHNICAL
In acute and subchronic neurotoxicity screening studies in rats, imidacloprid
produced slight neurobehavioral effects in each study at the highest dose tested.
There were no correlating morphological changes observed in the neural tissues.

In a one-generation developmental neurotoxicity screening study in rats, offspring exposed to imidacloprid showed decreased body weights and motor activities. These effects occurred at the highest dose tested and in conjunction with maternal toxicity. There were no correlating morphological changes observed in the neural tissues.

**Mutagenicity**

**BETA-CYFLUTHRIN TECHNICAL**
Numerous in vitro and in vivo mutagenicity studies have been conducted on beta-cyfluthrin, all of which are negative.

**IMIDACLOPRID TECHNICAL**
The imidacloprid mutagenicity studies, taken collectively, demonstrate that the active ingredient is not genotoxic or mutagenic.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental Precautions**
This product is toxic to fish. Do not apply directly to water. Apply this product only as specified on the label. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment washwater.

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance**
It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow any applicable state or local guidelines. Never place unused product down any indoor or outdoor drain.

**Container Disposal**
Completely empty bag into application equipment. Do not reuse empty bag. Place bag in trash.

**RCRA Classification**
Not Regulated under this Statute

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**SECTION 14. TRANSPORT INFORMATION**

**DOT CLASSIFICATION:**
Not regulated for transportation

**FREIGHT CLASSIFICATION:**
Insecticide or Fungicides, N.O.I., other than poison
SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA list
  None

TSCA 12b export notification
  None

SARA Title III - section 302 - notification and information
  None

SARA Title III - section 313 - toxic chemical release reporting
  Beta-cyfluthrin Technical  68359-37-5  1.0%

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

Beta-cyfluthrin Technical  68359-37-5

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

International Regulations

EU Classification
  None

European Inventory of Existing Commercial Substances (EINECS)
  None
Reason to Issue: Product Name Change; Update component information in Section 2. Composition/Information on Ingredients.

Approval Date: 11/21/2003

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