



**BAYER ADVANCED COMPLETE BRAND INSECT KILLER  
FOR SOIL & TURF READY-TO-SPREAD GRANULES**

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Version 2.0 / USA  
102000011911

Revision Date: 05/06/2014  
Print Date: 05/07/2014

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE  
COMPANY/UNDERTAKING**

**Product identifier**

**Trade name** BAYER ADVANCED COMPLETE BRAND INSECT KILLER FOR SOIL  
& TURF READY-TO-SPREAD GRANULES

**Product code (UVP)** 06424120

**SDS Number** 102000011911

**EPA Registration No.** 72155-31

**Relevant identified uses of the substance or mixture and uses advised against**

**Use** Insecticide

**Restrictions on use** See product label for restrictions.

**Information on manufacturer**

Bayer Environmental Science  
2 T.W. Alexander Drive  
Research Triangle PK, NC 27709  
United States

**Emergency Telephone  
Number (24hr/ 7 days)** 1-800-334-7577 (24 hours/day)

**Product Information  
Telephone Number** 1-800-331-2867

**SDS Information or Request** SDSINFO.BCS-NA@bayer.com

**SECTION 2: HAZARDS IDENTIFICATION**

**Classification in accordance with regulation HCS 29CFR §1910.1200**

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

**Other hazards**

No particular hazards known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name	CAS-No.	Average % by Weight
Imidacloprid	138261-41-3	0.15
Beta-Cyfluthrin	68359-37-5	0.05



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**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	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.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** To date no symptoms are known.

**Indication of any immediate medical attention and special treatment needed**

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

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**SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing media**

**Suitable** Water, Foam, Dry chemical

**Unsuitable** None known.

**Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.

**Advice for firefighters**

**Special protective equipment for fire-fighters** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**Further information** Keep out of smoke. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.



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<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

**Methods and materials for containment and cleaning up**

**Methods for cleaning up** Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Hygiene measures** Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Store in original container and out of the reach of children, preferably in a locked storage area. Keep containers tightly closed in a dry, cool and well-ventilated place.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Imidacloprid	138261-41-3	5ug/m3 (AN ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	50ug/m3 (ST ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	0.7 mg/m3 (TWA)		OES BCS*
Beta-Cyfluthrin	68359-37-5	50ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	50ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	5ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	5ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	0.01 mg/m3 (TWA)		OES BCS*

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

**Exposure controls**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**

Respiratory protection is not required under anticipated circumstances of exposure.  
In case of insufficient ventilation wear suitable respiratory equipment.

**Hand protection**

Chemical resistant nitrile rubber gloves

**Eye protection**

Safety glasses with side-shields

**Skin and body protection**

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

**General protective measures**

There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.  
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, using the toilet or applying cosmetics.  
Do not allow children or pets to enter the treated area until granules have been watered into the soil and the grass or soil is dry.



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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	light brown
<b>Physical State</b>	granular
<b>Odor</b>	characteristic
<b>Odour Threshold</b>	no data available
<b>pH</b>	6.7 at 5 %
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Bulk density</b>	43 - 49 lb/ft <sup>3</sup>
<b>Evaporation rate</b>	not applicable
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	not applicable
<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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**SECTION 10: STABILITY AND REACTIVITY**

<b>Reactivity</b>	
<b>Thermal decomposition</b>	no data available
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.



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<b>Conditions to avoid</b>	no data available
<b>Incompatible materials</b>	Acids
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>Exposure routes</b>	Eye contact, Ingestion, Inhalation, Skin Absorption
<b>Immediate Effects</b>	
<b>Eye</b>	Moderate eye irritation.
<b>Skin</b>	Harmful if absorbed through skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.

**Information on toxicological effects**

<b>Acute oral toxicity</b>	LD50 (male/female combined rat) > 2,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (male/female combined rat) > 1.2 mg/l Exposure time: 4 h Highest attainable concentration. Determined in the form of a respirable aerosol. (actual)  LC50 (male/female combined rat) > 4.8 mg/l Exposure time: 1 h Determined in the form of a respirable aerosol. Extrapolated from the 4 hr LC50. (actual)
<b>Acute dermal toxicity</b>	LD50 (male/female combined rat) > 4,000 mg/kg
<b>Skin irritation</b>	No skin irritation (rabbit)
<b>Eye irritation</b>	No eye irritation (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (guinea pig)

**Assessment repeated dose toxicity**

The toxic effects of beta-Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.  
Imidacloprid did not cause specific target organ toxicity in experimental animal studies.

**Assessment Mutagenicity**

beta-Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

**Assessment Carcinogenicity**



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beta-Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.  
Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**Assessment toxicity to reproduction**

beta-Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with beta-Cyfluthrin is related to parental toxicity.

Imidacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity.

**Assessment developmental toxicity**

beta-Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with beta-Cyfluthrin are related to maternal toxicity.

Imidacloprid caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Imidacloprid are related to maternal toxicity.

**Further information**

Acute toxicity studies have been bridged from a similar formulation(s).

The non-acute information pertains to the active ingredient(s).

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**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish**

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 0.000068 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient beta-cyfluthrin.

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 211 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient imidacloprid.

**Toxicity to aquatic  
invertebrates**

EC50 (Water flea (*Daphnia magna*)) 0.00029 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient beta-cyfluthrin.

EC50 (Water flea (*Daphnia magna*)) 85 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient imidacloprid.



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LC50 (*Chironomus riparius* (non-biting midge)) 0.0552 mg/l  
Exposure time: 24 h  
The value mentioned relates to the active ingredient imidacloprid.

<b>Toxicity to aquatic plants</b>	IC50 ( <i>Desmodesmus subspicatus</i> ) > 0.01 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient beta-cyfluthrin. No acute toxicity was observed at its limit of water solubility.  EC50 ( <i>Desmodesmus subspicatus</i> ) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient imidacloprid.
<b>Biodegradability</b>	beta-Cyfluthrin: ; not rapidly biodegradable Imidacloprid: ; not rapidly biodegradable
<b>Koc</b>	beta-Cyfluthrin: Koc: 508 - 3179 Imidacloprid: Koc: 225
<b>Bioaccumulation</b>	beta-Cyfluthrin: Bioconcentration factor (BCF) 506; Does not bioaccumulate. Imidacloprid: ; Does not bioaccumulate.
<b>Mobility in soil</b>	beta-Cyfluthrin: Immobile in soil Imidacloprid: Moderately mobile in soils
<b>Environmental precautions</b>	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

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## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

<b>Product</b>	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 container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.
<b>Contaminated packaging</b>	Empty remaining contents. Do not re-use empty containers. Place empty container in trash.
<b>RCRA Information</b>	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

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**SECTION 14: TRANSPORT INFORMATION**

**49CFR** Not dangerous goods / not hazardous material

**IMDG**

UN number	<b>3077</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BETA-CYFLUTHRIN MIXTURE)

**IATA**

UN number	<b>3077</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (BETA-CYFLUTHRIN MIXTURE )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 72155-31

**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**

Beta-Cyfluthrin	68359-37-5	1.0%
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**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.



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**US State Right-To-Know Ingredients**

Beta-Cyfluthrin 68359-37-5 NJ

**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.

**EPA/FIFRA Information:**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

**Signal word:** Caution!

**Hazard statements:** Harmful if swallowed, inhaled or absorbed through the skin.  
Moderate eye irritation.  
Avoid contact with skin, eyes and clothing.  
Wash thoroughly with soap and water after handling.  
Remove and wash contaminated clothing before re-use.

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**SECTION 16: OTHER INFORMATION**

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

Health - 1 Flammability - 0 Instability - 0 Others - none

**HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)**

Health - 1 Flammability - 0 Physical Hazard - 0 PPE -

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

**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

**Revision Date:** 05/06/2014

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