



**BAYER ADVANCED COMPLETE BRAND INSECT KILLER  
FOR SOIL & TURF CONCENTRATE**

Version 2 / USA  
102000015132

1/11  
Revision Date: 09/12/2013  
Print Date: 07/08/2015

**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 CONCENTRATE  
Product code (UVP) 05964457  
SDS Number 102000015132  
EPA Registration No. 72155-29

**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 no.**

All Emergencies, 24hr/ 7 days 1-800-334-7577 (24 hours/day)

**Product Information  
Telephone No.**

**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**

<b>Hazardous Component Name</b>	<b>CAS-No.</b>	<b>Average % by Weight</b>
Imidacloprid	138261-41-3	0.72
Beta-Cyfluthrin	68359-37-5	0.36
Glycerine	56-81-5	8.00



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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** No symptoms known or expected.

**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. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off



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	from fire fighting to enter drains or water courses.
<b>Flash point</b>	93.3 °C
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	not applicable

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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** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. 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.

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**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on protection against fire and explosion** No special precautions required.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

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

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

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

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

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Imidacloprid	138261-41-3	0.7 mg/m3 (TWA)		OES BCS*
Imidacloprid	138261-41-3	5 ug/m3 (AN ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	50 ug/m3 (ST ESL)	07 2011	TX ESL
Beta-Cyfluthrin	68359-37-5	50 ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	50 ug/m3 (ST ESL)	10 2003	TX ESL
Beta-Cyfluthrin (Particulate.)	68359-37-5	5 ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	5 ug/m3 (AN ESL)	10 2003	TX ESL
Beta-Cyfluthrin	68359-37-5	0.01 mg/m3 (TWA)		OES BCS*
Glycerine (Mist.)	56-81-5	10 mg/m3 (TWA)	02 2012	ACGIH
Glycerine (Total dust.)	56-81-5	15 mg/m3 (PEL)	02 2006	OSHA Z1
Glycerine (Respirable fraction.)	56-81-5	5 mg/m3 (PEL)	02 2006	OSHA Z1
Glycerine (Total dust.)	56-81-5	10 mg/m3 (TWA)	1989	OSHA Z1A
Glycerine (Respirable fraction.)	56-81-5	5 mg/m3 (TWA)	1989	OSHA Z1A
Glycerine (Total dust and mist.)	56-81-5	10 mg/m3 (TWA)	06 2008	TN OEL
Glycerine (Respirable fraction and dust or fume.)	56-81-5	5 mg/m3 (TWA)	06 2008	TN OEL
Glycerine	56-81-5	5 ug/m3 (AN ESL)	03 2012	TX ESL
Glycerine	56-81-5	100 ug/m3 (AN ESL)	03 2012	TX ESL
Glycerine	56-81-5	50 ug/m3 (ST ESL)	03 2012	TX ESL
Glycerine	56-81-5	1000 ug/m3 (ST ESL)	03 2012	TX ESL

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

**Exposure controls**



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**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.

**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 inhalation of vapour or mist.

Avoid contact with skin and eyes.

Do not allow children or pets to enter the treated area until it has dried.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	white to light beige
<b>Physical State</b>	Liquid
<b>Odor</b>	characteristic
<b>Odour Threshold</b>	no data available
<b>pH</b>	4.5 - 6.2 (100 %)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.03 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	no data available
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	not applicable



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<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	300 - 800 mPa.s
<b>Flash point</b>	93.3 °C
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	not applicable

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**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**

**Thermal decomposition** not applicable

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** freezing

**Incompatible materials** no data available

**Hazardous decomposition products** no data available

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**Exposure routes** Eye contact, Ingestion, Inhalation, Skin contact

**Immediate Effects**

**Eye** Moderate eye irritation.

**Ingestion** Harmful if swallowed.



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**Inhalation** Harmful if inhaled.

**Information on toxicological effects**

**Acute oral toxicity** LD50 (male/female combined rat) > 2,000 mg/kg

**Acute inhalation toxicity** LC50 (male/female combined rat) > 1.2 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
Highest attainable concentration.  
No deaths

LC50 (male/female combined rat) > 4.8 mg/l  
Exposure time: 1 h  
Determined in the form of liquid aerosol.  
Extrapolated from the 4 hr LC50.

**Acute dermal toxicity** LD50 (male/female combined rat) > 4,000 mg/kg

**Skin irritation** No skin irritation (rabbit)

**Eye irritation** No eye irritation (rabbit)

**Sensitisation** Non-sensitizing. (guinea pig)

**Assessment repeated dose toxicity**

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

**Assessment Mutagenicity**

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

**Assessment Carcinogenicity**

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

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.



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### Assessment toxicity to reproduction

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.

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.

### Assessment developmental toxicity

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

### Further information

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

LC50 (*Chironomus riparius* (non-biting midge)) 0.0552 mg/l

Exposure time: 24 h

The value mentioned relates to the active ingredient imidacloprid.

### Toxicity to aquatic plants

IC50 (*Desmodium subspicatus*) > 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 (*Desmodium subspicatus*) > 10 mg/l

Growth rate; Exposure time: 72 h

The value mentioned relates to the active ingredient imidacloprid.





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<b>Biodegradability</b>	Imidacloprid: not rapidly biodegradable  beta-Cyfluthrin: not rapidly biodegradable
<b>Koc</b>	Imidacloprid: Koc:225  beta-Cyfluthrin: Koc:508 - 3179
<b>Bioaccumulation</b>	Imidacloprid: Does not bioaccumulate. beta-Cyfluthrin: Bioconcentration factor (BCF) 506 Does not bioaccumulate.
<b>Mobility in soil</b>	Imidacloprid: Moderately mobile in soils  beta-Cyfluthrin: Immobile in soil
<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 this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. 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>	Triple rinse containers. 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**

<b>49CFR</b>	Not dangerous goods / not hazardous material
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**IMDG**

UN number **3082**  
Class **9**  
Packaging group **III**  
Marine pollutant **YES**  
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION)**

**IATA**

UN number **3082**  
Class **9**  
Packaging group **III**  
Environm. Hazardous Mark **YES**  
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION )**

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.

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 72155-29

**US Federal Regulations**

**TSCA list**

Glycerine 56-81-5

**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%

**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 68359-37-5 NJ  
Glycerine 56-81-5 MN, RI

**Canadian Regulations**

**Canadian Domestic Substance List**

Glycerine 56-81-5



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**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**

**European Inventory of Existing Commercial Substances (EINECS)**

Glycerine 56-81-5

**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 by inhalation and if swallowed.  
Moderate eye irritation.  
Avoid contact with skin, eyes and clothing.  
Avoid breathing spray mist.  
Wash thoroughly with soap and water after handling.

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**SECTION 16: OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

Health - 2      Flammability - 1      Instability - 0      Others - none

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

Health - 2      Flammability - 1      Physical Hazard - 0      PPE -

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

Reason for Revision: The following sections have been revised: Section 5: Fire Fighting Measures.  
Section 9: Physical and Chemical Properties.

Revision Date: 09/12/2013

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