Bayer Environmental Science
SAFETY DATA SHEET

BAYER ADVANCED HOME PEST BED BUG & FLEA KILLER CONTINUOUS SPRAY

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

Product identifier
Trade name BAYER ADVANCED HOME PEST BED BUG & FLEA KILLER CONTINUOUS SPRAY
Product code (UVP) 80959591
SDS Number 102000026545
EPA Registration No. 72155-110

Relevant identified uses of the substance or mixture and uses advised against
Use Insecticide
Restrictions on use See product label for restrictions.

Information on supplier
Supplier Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States
Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.
Emergency Telephone Number (24hr/7 days) 1-800-334-7577
Product Information Telephone Number 1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Gases under pressure: Compressed gas

Signal word Warning

Hazard statements
Contains gas under pressure; may explode if heated.

Precautionary statements
Protect from sunlight. Store in a well-ventilated place.
Other hazards
No other hazards known.

SECTION 3: 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</td>
<td>138261-41-3</td>
<td>0.025</td>
</tr>
<tr>
<td>Beta-Cyfluthrin</td>
<td>68359-37-5</td>
<td>0.0125</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Description of first aid measures

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

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.

Skin contact
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.

Eye contact
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.

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.

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.
SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable None known.

Special hazards arising from the substance or mixture

Product is contained in a pressurised container which may explode on heating.

Advice for firefighters

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 from fire fighting to enter drains or water courses.

Flash point > 93.3 °C

Autoignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Explosivity not applicable

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.

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.
SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling  Use only in area provided with appropriate exhaust ventilation. Contents under pressure.

Advice on protection against fire and explosion  Keep away from heat and sources of ignition. Fire or intense heat may cause violent rupture of packages.

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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid</td>
<td>138261-41-3</td>
<td>50ug/m³ (ST ESL)</td>
<td>07 2011</td>
<td>TX ESL</td>
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<tr>
<td>Imidacloprid</td>
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<td>Imidacloprid</td>
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<td>OES BCS*</td>
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<tr>
<td>Beta-Cyfluthrin</td>
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<td>5ug/m³ (AN ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Beta-Cyfluthrin</td>
<td>68359-37-5</td>
<td>50ug/m³ (ST ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
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<tr>
<td>Beta-Cyfluthrin</td>
<td>68359-37-5</td>
<td>0.01 mg/m³ (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>

*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. When respirators are required, select NIOSH approved equipment
based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**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**  
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.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
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<tr>
<td>Physical State</td>
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<td>Odour Threshold</td>
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<td>pH</td>
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<td>Vapor Pressure</td>
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<td>Vapor Density (Air = 1)</td>
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<td>Density</td>
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<td>Evaporation rate</td>
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<td>Boiling Point</td>
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<tr>
<td>Melting / Freezing Point</td>
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<tr>
<td>Water solubility</td>
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<tr>
<td>Minimum Ignition Energy</td>
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<tr>
<td>Decomposition temperature</td>
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<td>Partition coefficient: n-octanol/water</td>
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<tr>
<td>Viscosity</td>
<td>380 mPa.s</td>
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<tr>
<td>Flash point</td>
<td>&gt; 93.3 °C</td>
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<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Explosivity</td>
<td>not applicable</td>
</tr>
</tbody>
</table>
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 decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Skin Absorption, Eye contact, Inhalation
Immediate Effects
Eye May cause slight irritation.
Skin May cause slight irritation.
Inhalation May cause irritation.

Information on toxicological effects
Acute oral toxicity LD50 (rat) > 5,000 mg/kg
Acute inhalation toxicity LC50 (rat) > 5.0 mg/l Exposure time: 4 h
Acute dermal toxicity LD50 (rat) > 5,000 mg/kg
Skin irritation Slight irritation (rabbit)
Eye irritation Minimally irritating. (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.

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

SECTION 12: ECOLOGICAL INFORMATION

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

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

EC50 (Daphnia magna (Water flea)) 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.

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

Toxicity to aquatic plants

EC50 (Desmodesmus subspicatus (green algae)) > 10 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient imidacloprid.

EC50 (Desmodesmus subspicatus (green algae)) > 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.

Biodegradability

Imidacloprid: not rapidly biodegradable
Beta-Cyfluthrin: not rapidly biodegradable

Koc

Imidacloprid: Koc: 225
Beta-Cyfluthrin: Koc: 508 - 3179

Bioaccumulation

Imidacloprid: Does not bioaccumulate.
Beta-Cyfluthrin: Bioconcentration factor (BCF) 506
Does not bioaccumulate.

Mobility in soil

Imidacloprid: Moderately mobile in soils
Beta-Cyfluthrin: Immobile in soil

Environmental precautions

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.
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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
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.

Contaminated packaging
Do not re-use empty containers. Place empty container in trash.

RCRA Information
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.

SECTION 14: TRANSPORT INFORMATION

49CFR
UN number 1950
Class 2.2
Packaging group
Proper shipping name AEROSOLS

IMDG
UN number 1950
Class 2.2
Packaging group
Marine pollutant NO
Proper shipping name AEROSOLS

IATA
UN number 1950
Class 2.2
Packaging group
Environm. Hazardous Mark NO
Proper shipping name AEROSOLS, NON-FLAMMABLE

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.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 72155-110
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

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, RI

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:

Hazard statements: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms
49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
CAS-Nr. Chemical Abstracts Service number
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
IARC: US. IARC Monographs on Occupational Exposures to Chemical Agents
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
N.O.S.: Not otherwise specified
NTP: US. National Toxicology Program (NTP) Report on Carcinogens
OECD: Organization for Economic Co-operation and Development
TDG: Transportation of Dangerous Goods
TWA: Time weighted average
UN: United Nations
WHO: World health organisation

NFPA 704 (National Fire Protection Association):
Health - 1  Flammability - 1  Instability - 0  Others - none

Health - 1  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 2: Hazards Identification. Section 11: Toxicological Information. Reviewed and updated for general editorial purposes.

Revision Date: 10/23/2015

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