



**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**1/10**  
Revision Date: 01/31/2019

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

**Product identifier**

**Trade name** BIOADVANCED SCIENCE-BASED SOLUTIONS DUAL  
ACTION ROSE & FLOWER INSECT KILLER

**Product code**

**SDS Number** 102000012234

**EPA Registration No.** 92564-11

**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**

SBM Life Science Corp.  
1001 Winstead, Ste 500  
Cary, NC 27513  
United States

**Emergency Telephone  
Number (24hr/ 7 days)** 1-877-229-3763 (24 hours/day)

**Product Information  
Telephone Number** 1-877-229-3724

**SDS Information or Request** SDS@sbm-company.com

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**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.

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

| <b>Hazardous Component Name</b> | <b>CAS-No.</b> | <b>Average % by Weight</b> |
|---------------------------------|----------------|----------------------------|
| Beta-Cyfluthrin                 | 68359-37-5     | 0.0015                     |
| Imidacloprid                    | 138261-41-3    | 0.012                      |

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**2/10**  
Revision Date: 01/31/2019

---

**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. 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.

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**3/10**  
Revision Date: 01/31/2019

---

|                                 |                   |
|---------------------------------|-------------------|
| <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** Isolate hazard area. Keep unauthorized people away. 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.

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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.

**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 a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.  
Protect from freezing.

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**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**4/10**  
Revision Date: 01/31/2019

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

**Control parameters**

| <b>Components</b>                 | <b>CAS-No.</b> | <b>Control parameters</b> | <b>Update</b> | <b>Basis</b> |
|-----------------------------------|----------------|---------------------------|---------------|--------------|
| Beta-Cyfluthrin                   | 68359-37-5     | 50ug/m3<br>(ST ESL)       | 10 2003       | TX ESL       |
| Beta-Cyfluthrin<br>(Particulate.) | 68359-37-5     | 50ug/m3<br>(ST ESL)       | 10 2003       | TX ESL       |
| Beta-Cyfluthrin<br>(Particulate.) | 68359-37-5     | 5ug/m3<br>(AN ESL)        | 10 2003       | TX ESL       |
| Beta-Cyfluthrin                   | 68359-37-5     | 5ug/m3<br>(AN ESL)        | 10 2003       | TX ESL       |
|                                   |                |                           |               |              |
|                                   |                |                           |               |              |
| Imidacloprid                      | 138261-41-3    | 5ug/m3<br>(AN ESL)        | 07 2011       | TX ESL       |
| Imidacloprid                      | 138261-41-3    | 50ug/m3<br>(ST ESL)       | 07 2011       | TX ESL       |

**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**

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**

Goggles

**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 inhalation of vapour or mist.

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 it has dried

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**5/10**  
Revision Date: 01/31/2019

---

**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>                                     | 5 - 7 at (25 °C)                    |
| <b>Vapor Pressure</b>                         | no data available                   |
| <b>Vapor Density (Air = 1)</b>                | no data available                   |
| <b>Density</b>                                | ca. 1.00 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>                       | soluble                             |
| <b>Minimum Ignition Energy</b>                | not applicable                      |
| <b>Decomposition temperature</b>              | no data available                   |
| <b>Partition coefficient: n-octanol/water</b> | no data available                   |
| <b>Viscosity</b>                              | 2 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**

|   |   |
|---|---|
| <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. |

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**6/10**

Revision Date: 01/31/2019

---

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

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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

**Immediate Effects**

**Eye** Moderate eye irritation.

**Skin** Harmful if absorbed through skin.

**Ingestion** Harmful if swallowed.

**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.  
(actual)

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.  
(actual)

**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**

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**

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**7/10**  
Revision Date: 01/31/2019

---

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.

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**8/10**  
Revision Date: 01/31/2019

---

|                                   |   |
|-----------------------------------|---|
|                                   | LC50 (Chironomus riparius (non-biting midge)) 0.0552 mg/l<br>Exposure time: 24 h<br>The value mentioned relates to the active ingredient imidacloprid.  |
| <b>Toxicity to aquatic plants</b> | IC50 (Desmodesmus subspicatus) > 0.01 mg/l<br>Growth rate; Exposure time: 72 h<br>The value mentioned relates to the active ingredient beta-cyfluthrin.<br>No acute toxicity was observed at its limit of water solubility.<br><br>EC50 (Desmodesmus subspicatus) > 10 mg/l<br>Growth rate; Exposure time: 72 h<br>The value mentioned relates to the active ingredient imidacloprid. |
| <b>Biodegradability</b>           | beta-Cyfluthrin: ; not rapidly biodegradable<br>Imidacloprid: ; not rapidly biodegradable   |
| <b>Koc</b>                        | beta-Cyfluthrin: Koc: 508 - 3179<br>Imidacloprid: Koc: 225  |
| <b>Bioaccumulation</b>            | beta-Cyfluthrin: Bioconcentration factor (BCF) 506; Does not bioaccumulate.<br>Imidacloprid: ; Does not bioaccumulate.  |
| <b>Mobility in soil</b>           | beta-Cyfluthrin: Immobile in soil<br>Imidacloprid: Moderately mobile in soils   |
| <b>Environmental precautions</b>  | Apply this product as specified on the label.<br>Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.<br>Do not allow to get into surface water, drains and ground water.   |

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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.<br>Never place unused product down any indoor or outdoor drain. |
| <b>Contaminated packaging</b> | Do not re-use empty containers.<br>Triple rinse containers.<br>Wrap and discard 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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**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**9/10**  
Revision Date: 01/31/2019

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**SECTION 14: TRANSPORT INFORMATION**

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

**IMDG**

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

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

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 92564-11

**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%

**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.

**BIOADVANCED SCIENCE-BASED SOLUTIONS  
DUAL ACTION ROSE & FLOWER INSECT  
KILLER**

Version 1.0 / USA  
102000012234

**10/10**  
Revision Date: 01/31/2019

---

**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.  
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 - 1 Flammability - 1 Instability - 0 Others - none

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

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:** Update emergency contact and product information number.

**Date of Previous Revision:** 05/01/2017

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are trademarks of SBM Life Science Corp.