

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

Version 1.0 / USA
102000032961

1/11

Revision Date: 01/31/2019

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

Product identifier	BIOADVANCED SCIENCE-BASED SOLUTIONS DUAL
Trade name	ACTION ROSE & FLOWER INSECT KILLER CONTINUOUS SPRAY
Product code	
SDS Number	102000032961
EPA Registration No.	92564-59
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	SBM Life Science Corp. 1001 Winstead Dr, Ste 500 Cary, NC 27513 United States
Responsible Department	
Emergency Telephone	
Number (24hr/ 7 days)	1-877-229-3763
Product Information	
Telephone Number	1-877-229-3724
Email	SDS@sbm-company.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.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.

No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**BIOADVANCED SCIENCE-BASED
SOLUTIONS DUAL ACTION ROSE & FLOWER
INSECT KILLER CONTINUOUS SPRAY**Version 1.0 / USA
102000032961**2/11**

Revision Date: 01/31/2019

Hazardous Component Name	CAS-No.	Concentration % by weight
Imidacloprid	138261-41-3	0.025
Beta-Cyfluthrin	68359-37-5	0.0125

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.

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

Version 1.0 / USA
102000032961

3/11

Revision Date: 01/31/2019

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 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
Auto-ignition 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. Handle and open container in a manner as to prevent spillage.

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

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

Version 1.0 / USA
102000032961

4/11

Revision Date: 01/31/2019

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

Components	CAS-No.	Control parameters	Update	Basis
Imidacloprid	138261-41-3	50ug/m3 (ST ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	5ug/m3 (AN ESL)	07 2011	TX ESL
Beta-Cyfluthrin	68359-37-5	5ug/m3 (AN ESL)	03 2014	TX ESL
Beta-Cyfluthrin	68359-37-5	50ug/m3 (ST ESL)	03 2014	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 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.

**BIOADVANCED SCIENCE-BASED SOLUTIONS
DUAL ACTION ROSE & FLOWER INSECT
KILLER CONTINUOUS SPRAY**Version 1.0 / USA
102000032961**5/11**Revision Date: 01/31/2019

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to beige
Physical State	Liquid
Odor	slight
Odour Threshold	No data available
pH	5.7 - 6.7 at 100 %
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Density	1.00 g/cm ³ at 20 °C
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available
Water solubility	soluble
Minimum Ignition Energy	Not applicable
Decomposition temperature	Not applicable
Partition coefficient: n-octanol/water	Not applicable
Viscosity	380 mPaxs
Flash point	> 93.3 °C
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not applicable

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.

**BIOADVANCED SCIENCE-BASED SOLUTIONS
DUAL ACTION ROSE & FLOWER INSECT
KILLER CONTINUOUS SPRAY**Version 1.0 / USA
102000032961**6/11**

Revision Date: 01/31/2019

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.

**BIOADVANCED SCIENCE-BASED
SOLUTIONS DUAL ACTION ROSE & FLOWER
INSECT KILLER CONTINUOUS SPRAY**
Version 1.0 / USA
102000032961

7/11

Revision Date: 01/31/2019

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

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

Version 1.0 / USA
102000032961

8/11

Revision Date: 01/31/2019

	<p>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.</p>
Biodegradability	<p>Imidacloprid: Not rapidly biodegradable Beta-Cyfluthrin: Not rapidly biodegradable</p>
Koc	<p>Imidacloprid: Koc: 225 Beta-Cyfluthrin: Koc: 508 - 3179</p>
Bioaccumulation	<p>Imidacloprid: Does not bioaccumulate. Beta-Cyfluthrin: Bioconcentration factor (BCF) 506 Does not bioaccumulate.</p>
Mobility in soil	<p>Imidacloprid: Moderately mobile in soils Beta-Cyfluthrin: Immobile in soil</p>
Environmental precautions	<p>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.</p>

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	<p>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.</p>
Contaminated packaging	<p>Do not re-use empty containers. Place empty container in trash.</p>
RCRA Information	<p>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.</p>

SECTION 14: TRANSPORT INFORMATION

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



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

Version 1.0 / USA
102000032961

9/11

Revision Date: 01/31/2019

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.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 92564-59

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.

**BIOADVANCED SCIENCE-BASED SOLUTIONS
DUAL ACTION ROSE & FLOWER INSECT
KILLER CONTINUOUS SPRAY**
Version 1.0 / USA
102000032961**10/11**

Revision Date: 01/31/2019

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
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
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

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

SBM LIFE SCIENCE CORP.

SAFETY DATA SHEET



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

Version 1.0 / USA
102000032961

11/11

Revision Date: 01/31/2019

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.