BIOADVANCED SCIENCE-BASED SOLUTIONS TREE & SHRUB INSECT KILLER SPRAY READY-TO-SPRAY

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

Product identifier

Trade name	BIOADVANCED SCIENCE-BASED SOLUTIONS TREE & SHRUB INSECT KILLER SPRAY READY-TO-SPRAY
Product code	
SDS Number	102000012174
EPA Registration No.	92564-17

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.
11000 Weston Parkway,
Suite 150 , Cary, NC 27513
United States

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Emergency Telephone Number (24hr/ 7 days)	1-877-229-3763
Product Information Telephone Number	1-877-229-3724
SDS Information or Request	SDS@sbm-company.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Skin sensitisation : Category 1
Acute toxicity (Inhalation): Category 3
Acute toxicity (Oral): Category 4



Signal word: Danger

Hazard statements
Toxic if inhaled.
Harmful if swallowed.
May cause an allergic skin reaction.

Precautionary statements
Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Use only outdoors or in a well-ventilated area.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF ON SKIN: Wash with plenty of water/soap.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
Rinse mouth.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Cyfluthrin	68359-37-5	0.75

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	High volume water jet
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.
Flash point	> 93 °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	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	Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
Hygiene measures	Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove contaminated clothing immediately and dispose of safely. 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	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. Protect from freezing.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Cyfluthrin (Particulate.)	68359-37-5	5ug/m3 (AN ESL)	02 2013	TX ESL

Cyfluthrin (Particulate.)	68359-37-5	50ug/m3 (ST ESL)	02 2013	TX ESL

No control parameters known.

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	Safety glasses with side-shields
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Do not allow children or pets to enter the treated area until it has dried. 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

Appearance	white to light beige
Physical State	liquid opaque
Odor	mild
Odour Threshold	no data available
pH	3.5
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	1.00 g/cm³ at 20 °C
Evapouration rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	dispersible
Minimum Ignition Energy	not applicable

Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	not applicable
Viscosity	no data available
Flash point	> 93 °C
Autoignition 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.
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 contact, Eye contact, Ingestion, Inhalation
Immediate Effects	
Eye	Causes eye irritation.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 (male rat) 647 mg/kg LD50 (female rat) 695 mg/kg
Acute inhalation toxicity	LC50 (male rat) 0.716 mg/l

	Exposure time: 4 h Determined in the form of liquid aerosol. (actual)
	LC50 (female rat) 0.924 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual)
	LC50 (male/female combined rat) > 2.029 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. (actual)
Acute dermal toxicity	LD50 (male/female combined rabbit) > 2,000 mg/kg
Skin irritation	Moderate skin irritation. (rabbit)
Eye irritation	Minimally irritating. (rabbit)
Sensitisation	Sensitising (guinea pig)

Assessment repeated dose toxicity

The toxic effects of Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment Mutagenicity

Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

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

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

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 Cyfluthrin is related to parental toxicity.

Assessment developmental toxicity

Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with 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)) 0.00047 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient cyfluthrin.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) 0.00016 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient cyfluthrin.
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus) > 10 mg/l Growth rate; Exposure time: 72 h
Biodegradability	Cyfluthrin: ; not rapidly biodegradable
Koc	Cyfluthrin: Koc: 64300
Bioaccumulation	Cyfluthrin: Bioconcentration factor (BCF) 506; Does not bioaccumulate.
Mobility in soil	Cyfluthrin: Immobile in soil
Environmental precautions	Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not allow to get into surface water, drains and ground water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Apply this product as specified on the label. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

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. Triple rinse 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 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. (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. (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. 92564-17
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

Cyfluthrin	68359-37-5	10,000lbs

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

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.

International Regulations
European Inventory of Existing Commercial Substances (EINECS)

Cyfluthrin	68359-37-5

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.
Causes eye irritation.
Avoid contact with skin, eyes and clothing.
Wash thoroughly with soap and water after handling.

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

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Reason for Revision: New Issue

Date of Previous Revision: N/A

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