

**BIOADVANCED SCIENCE-BASED
SOLUTIONS 3-IN-1 INSECT, DISEASE &
MITE CONTROL READY-TO-SPRAY**

Version 1.0 / USA
102000015315

1/11

Revision Date: 01/31/2019

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

Product identifier

Trade name BIOADVANCED SCIENCE-BASED SOLUTIONS 3-IN-1 INSECT,
DISEASE & MITE CONTROL READY-TO-SPRAY

Product code

SDS Number 102000015315

EPA Registration No. 92564-31

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

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Reproductive toxicity : Category 2



Signal word: Warning

Hazard statements

Suspected of damaging fertility or the unborn child.

Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

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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. | Average % by Weight |
|---------------------------------|----------------|----------------------------|
| Imidacloprid | 138261-41-3 | 0.47 |
| tau-Fluvalinate | 102851-06-9 | 0.61 |
| Tebuconazole | 107534-96-3 | 0.65 |

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.

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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Water spray, Foam, Carbon dioxide (CO₂), 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 Cool closed containers exposed to fire with water spray. Fight fire from upwind position. Keep out of smoke. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point > 93.4 °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 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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

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

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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.

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 Store in original container and out of the reach of children, preferably in a locked storage area.

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 |
|---|----------------|---------------------------|---------------|--------------|
| 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 (Respirable fraction.) | 56-81-5 | 5 mg/m3 (TWA) | 1989 | OSHA Z1A |
| Glycerine (Total dust.) | 56-81-5 | 10 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 (Particulate.) | 56-81-5 | 50ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Glycerine (Particulate.) | 56-81-5 | 5ug/m3 (AN ESL) | 02 2013 | TX ESL |
| Glycerine (Vapor.) | 56-81-5 | 100ug/m3 (AN ESL) | 02 2013 | TX ESL |
| Glycerine (Vapor.) | 56-81-5 | 1000ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Imidacloprid | 138261-41-3 | 5ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Imidacloprid | 138261-41-3 | 50ug/m3 (ST ESL) | 07 2011 | TX ESL |

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| | | | | |
|--------------|-------------|---------------------|---------|--------|
| Tebuconazole | 107534-96-3 | 50ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Tebuconazole | 107534-96-3 | 5ug/m3 (AN 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

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 |
| Odor | almost odourless |
| Odour Threshold | no data available |
| pH | >= 3 at 100 % |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Density | ca. 1.03 g/cm ³ at 20 °C |
| Evaporation rate | no data available |

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| | |
|---|-------------------|
| Boiling Point | no data available |
| Melting / Freezing Point | no data available |
| Water solubility | dispersible |
| Minimum Ignition Energy | not applicable |
| Decomposition temperature | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Viscosity | 100 - 500 mPa.s |
| Flash point | > 93.4 °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 | no data available |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | no data available |
| Incompatible materials | no data available |
| Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|---|--|
| Exposure routes | Inhalation, Skin Absorption, Eye contact, Ingestion |
| Immediate Effects | |
| Eye | May cause mild irritation to eyes. |
| Skin | Harmful if absorbed through skin. May cause slight irritation. |
| Ingestion | Harmful if swallowed. |
| Inhalation | Harmful if inhaled. |
| Information on toxicological effects | |

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| | |
|----------------------------------|--|
| Acute oral toxicity | LD50 (female rat) > 2,000 mg/kg |
| Acute inhalation toxicity | LC50 (male/female combined rat) > 5.1 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. (actual) |
| | LC50 (male/female combined rat) > 20.4 mg/l Exposure time: 1 h Determined in the form of a respirable aerosol. Extrapolated from the 4 hr LC50. (actual) |
| Acute dermal toxicity | LD50 (male/female combined rat) > 4,000 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.
Tau-fluvalinate did not cause specific target organ toxicity in experimental animal studies.
Tebuconazole did not cause specific target organ toxicity in experimental animal studies.

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.
Tau-fluvalinate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Tebuconazole 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.
Tau-fluvalinate was not carcinogenic in lifetime feeding studies in rats and mice.
Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The mechanism of tumour formation is not considered to be relevant to man.

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

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to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity. Tau-fluvalinate did not cause reproductive toxicity in a two-generation study in rats. Tebuconazole 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 Tebuconazole 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. Tau-fluvalinate did not cause developmental toxicity in rats and rabbits. Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.

Further information

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--|---|
| Toxicity to fish | LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.011 mg/l The value mentioned relates to the active ingredient tau-fluvalinate. LC50 (Trout) 0.042 mg/l The value mentioned relates to the active ingredient tau-fluvalinate. |
| Toxicity to aquatic invertebrates | LC50 (Daphnia) 0.011 mg/l The value mentioned relates to the active ingredient tau-fluvalinate. |
| Biodegradability | Imidacloprid: ; not rapidly biodegradable Tau-fluvalinate: ; not rapidly biodegradable Tebuconazole: ; not rapidly biodegradable |
| Koc | Imidacloprid: Koc: 225 Tau-fluvalinate: Koc: 135000 Tebuconazole: Koc: 769 |
| Bioaccumulation | Imidacloprid: ; Does not bioaccumulate. Tau-fluvalinate: Bioconcentration factor (BCF) 1,979; Does not bioaccumulate. Tebuconazole: Bioconcentration factor (BCF) 35 - 59; Does not bioaccumulate. |
| Mobility in soil | Imidacloprid: Moderately mobile in soils Tau-fluvalinate: Immobile in soil Tebuconazole: Slightly mobile in soils |
| Environmental precautions | Do not apply when weather conditions favor runoff or drift. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label. Do not allow to get into surface water, drains and ground water. |

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Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
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. 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. (TAU-FLUVALINATE SOLUTION) |
| IATA | |
| UN number | 3082 |
| Class | 9 |
| Packaging group | III |
| Environm. Hazardous Mark | YES |
| Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TAU-FLUVALINATE 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. 92564-31

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

tau-Fluvalinate 102851-06-9 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

tau-Fluvalinate 102851-06-9 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

Tebuconazole 107534-96-3

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 inhaled or absorbed through skin.
Harmful if swallowed.
Avoid breathing spray mist.
Avoid contact with skin, eyes and clothing.



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SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Health - 1 Flammability - 0 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: 03/13/2018

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.