

**BIOADVANCED SCIENCE-BASED  
SOLUTIONS 12 MONTH TREE & SHRUB  
PROTECT & FEED CONCENTRATE II**

Version 1.0 / USA  
102000017711

**1/12**

Revision Date: 02/01/2019

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

**Product identifier**

**Trade name** BIOADVANCED SCIENCE-BASED SOLUTIONS 12 MONTH TREE &  
SHRUB PROTECT & FEED CONCENTRATE II

**Product code**

**SDS Number** 102000017711

**EPA Registration No.** 92564-39

**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 Dr, Ste 500  
Cary, NC 27513  
United States

**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

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**SECTION 2: HAZARDS IDENTIFICATION**

**Classification in accordance with regulation HCS 29CFR §1910.1200**

Acute toxicity (Oral): Category 4



**Signal word:** Warning

**Hazard statements**  
Harmful if swallowed.

**Precautionary statements**  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
Rinse mouth.

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Dispose of contents/container in accordance with local regulation.

**Other hazards**  
No other 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>
Imidacloprid	138261-41-3	0.74
Clothianidin	210880-92-5	0.37
Potassium chloride	7447-40-7	1.69
Diammonium hydrogenorthophosphate	7783-28-0	2.28
Glycerine	56-81-5	8.40

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**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 spray, Foam, Carbon dioxide (CO<sub>2</sub>), 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.

**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

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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** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**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.

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

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Imidacloprid	138261-41-3	5ug/m3 (AN ESL)	07 2011	TX ESL
Imidacloprid	138261-41-3	50ug/m3 (ST ESL)	07 2011	TX ESL
Potassium chloride (Particulate.)	7447-40-7	5ug/m3 (AN ESL)	02 2013	TX ESL
Potassium chloride (Particulate.)	7447-40-7	50ug/m3 (ST ESL)	02 2013	TX ESL
Diammonium hydrogenorthophosphate (Particulate.)	7783-28-0	5ug/m3 (AN ESL)	02 2013	TX ESL
Diammonium hydrogenorthophosphate (Particulate.)	7783-28-0	50ug/m3 (ST ESL)	02 2013	TX ESL
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	56-81-5	10 mg/m3	06 2008	TN OEL

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(Total dust and mist.)		(TWA)		
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

**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**

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.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	green
<b>Physical State</b>	Liquid
<b>Odor</b>	slight latex-like
<b>Odour Threshold</b>	no data available
<b>pH</b>	6.0 - 7.5

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<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.07 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>	dispersible
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	not applicable
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	200 - 600 cps
<b>Flash point</b>	> 93.4 °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>	not applicable
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<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**

<b>Exposure routes</b>	Ingestion, Skin Absorption, Eye contact, Inhalation
<b>Immediate Effects</b>	

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<b>Eye</b>	May cause eye irritation.
<b>Skin</b>	May cause skin irritation. Harmful if absorbed through skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Avoid breathing spray mist.

**Information on toxicological effects**

<b>Acute oral toxicity</b>	LD50 (female rat) 500 - 2,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (rat) > 2.7 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration. No deaths  LC50 (rat) > 10.8 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50.
<b>Acute dermal toxicity</b>	LD50 (rat) > 4,000 mg/kg
<b>Skin irritation</b>	No skin irritation (rabbit)
<b>Eye irritation</b>	Mild eye irritation. (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (guinea pig)

**Assessment repeated dose toxicity**

Imidacloprid did not cause specific target organ toxicity in experimental animal studies.  
Clothianidin 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.  
Clothianidin was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

**Assessment Carcinogenicity**

Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.  
Clothianidin was not carcinogenic in lifetime feeding studies in rats and mice.

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

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**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. Clothianidin 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 Clothianidin 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.  
Clothianidin did not cause developmental toxicity in rats.  
Clothianidin caused developmental toxicity in rabbits only at dose levels toxic to the dams. The developmental effects seen with Clothianidin 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*)) 211 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient imidacloprid.

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) > 104.2 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient clothianidin.

**Toxicity to aquatic invertebrates**

EC50 (Water flea (*Daphnia magna*)) 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 (Water flea (*Daphnia magna*)) > 40 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient clothianidin.

EC15 (*Chironomus riparius* (non-biting midge)) 0.00072 mg/l  
Exposure time: 28 d  
The value mentioned relates to the active ingredient clothianidin.

EC50 (*Chironomus riparius* (non-biting midge)) 0.00106 mg/l  
Exposure time: 28 d  
The value mentioned relates to the active ingredient clothianidin.



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<b>Chronic toxicity to aquatic invertebrates</b>	NOEC (Daphnia): 0.12 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient clothianidin.
<b>Toxicity to aquatic plants</b>	EC50 (Desmodosmus subspicatus) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient imidacloprid.  IC50 (Pseudokirchneriella subcapitata) 70 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient clothianidin.  EC50 (Lemna gibba (duckweed)) 270 mg/l Exposure time: 14 d The value mentioned relates to the active ingredient clothianidin.
<b>Biodegradability</b>	Imidacloprid: ; not rapidly biodegradable Clothianidin: ; not rapidly biodegradable
<b>Koc</b>	Imidacloprid: Koc: 225 Clothianidin: Koc: 84 - 345
<b>Bioaccumulation</b>	Imidacloprid: ; Does not bioaccumulate. Clothianidin: ; Does not bioaccumulate.
<b>Mobility in soil</b>	Imidacloprid: Moderately mobile in soils Clothianidin: Moderately mobile in soils
<b>Environmental precautions</b>	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.

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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. Never place unused product down any indoor or outdoor drain.
<b>Contaminated packaging</b>	Do not re-use empty containers. Place empty container in trash. Follow advice on product label and/or leaflet.

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**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.

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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.  
(CLOTHIANIDIN, IMIDACLOPRID SOLUTION)

**IATA**

UN number **3082**  
Class 9  
Packaging group III  
Environm. Hazardous Mark YES  
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(CLOTHIANIDIN, IMIDACLOPRID 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.** 92564-39

**US Federal Regulations**

**TSCA list**

Potassium chloride 7447-40-7  
Diammonium hydrogenorthophosphate 7783-28-0  
Glycerine 56-81-5

**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**

Diammonium hydrogenorthophosphate 7783-28-0 1.0%

**US States Regulatory Reporting**

**CA Prop65**

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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**

Glycerine	56-81-5	MN
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**Canadian Regulations**

**Canadian Domestic Substance List**

Potassium chloride	7447-40-7
Diammonium hydrogenorthophosphate	7783-28-0
Glycerine	56-81-5

**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)**

Potassium chloride	7447-40-7
Diammonium hydrogenorthophosphate	7783-28-0
Glycerine	56-81-5

**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 if swallowed or absorbed through skin.  
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**



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**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.