BIOADVANCED SCIENCE-BASED SOLUTIONS 3 IN 1 WEED & FEED FOR SOUTHERN LAWNS PLUS INSECT KILLER

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

Product identifier	
Trade name	BIOADVANCED SCIENCE-BASED SOLUTIONS 3 IN 1 WEED & FEED FOR SOUTHERN LAWNS PLUS INSECT KILLER
Product code	
SDS Number	19NACOM006
EPA Registration No.	92564-82

Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide, Insecticide, & Fertilizer
Restrictions on use	See product label for restrictions.
Information on supplier	
Supplier	SBM Life Science Corp. 11000 Weston Parkway, Suite 150 Cary, NC 27513 United States
Responsible Department	Email: SDS@sbm-company.com
Emergency telephone no.	
Emergency Telephone Number (24hr/ 7 days)	1-877-229-3763
Product Information Telephone Number	1-877-229-3724

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

	Acute oral	Acute dermal	Acute inhalation	Eye irritation	Skin irritation	Skin Sensitization
Category	Category IV	Category IV	Category IV	Category IV	Slight - IV	Not classified



Signal word: **Caution**

Hazard statements
Harmful if inhaled.

Precautionary statements
Avoid breathing dust.
Use only outdoors or in a well-ventilated area.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Indaziflam	950782-86-2	0.027
Penoxsulam	219714-96-2	0.041
Dicamba	1918-00-9	0.088
Bifenthrin	82657-04-3	0.185
Urea	57-13-6	77.06
Potassium sulfate	7778-80-5	6.5
Sulfur	7704-34-9	3.8

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 — No symptoms known or expected.

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.
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. Use appropriate extinguishing media for material that is supplying fuel. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available

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	Sweep up or vacuum up spillage and collect in suitable container for disposal. 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 — 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.

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.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Dicamba	1918-00-9	50ug/m3 (ST ESL)	03 2014	TX ESL
Dicamba	1918-00-9	5ug/m3 (AN ESL)	03 2014	TX ESL
Urea	57-13-6	5ug/m3 (AN ESL)	03 2014	TX ESL
Urea	57-13-6	50ug/m3 (ST ESL)	03 2014	TX ESL
Urea (Total particulate.)	57-13-6	10 mg/m3 (TWA)	2010	WEEL
Sodium aluminium silicate (Respirable fraction.)	1344-00-9	1 mg/m3 (TWA)	02 2012	ACGIH
Sodium aluminium silicate	1344-00-9	2 mg/m3 (REL)	2010	NIOSH
Sodium aluminium silicate	1344-00-9	2 mg/m3	1989	OSHA Z1A

		(TWA)		
Sodium aluminium silicate	1344-00-9	2 mg/m3 (TWA)	06 2008	TN OEL
Sodium aluminium silicate	1344-00-9	5ug/m3 (AN ESL)	03 2014	TX ESL
Sodium aluminium silicate	1344-00-9	50ug/m3 (ST ESL)	03 2014	TX ESL
Sodium aluminium silicate	1344-00-9	2 mg/m3 (TWA PEL)	08 2010	US CA OEL
Sulfur	7704-34-9	5ug/m3 (AN ESL)	03 2014	TX ESL
Sulfur	7704-34-9	50ug/m3 (ST ESL)	03 2014	TX ESL
Calcium carbonate (Respirable.)	1317-65-3	5 mg/m3 (REL)	2010	NIOSH
Calcium carbonate (Total)	1317-65-3	10 mg/m3 (REL)	2010	NIOSH
Calcium carbonate (Respirable fraction.)	1317-65-3	5 mg/m3 (PEL)	02 2006	OSHA Z1
Calcium carbonate (Total dust.)	1317-65-3	15 mg/m3 (PEL)	02 2006	OSHA Z1
Calcium carbonate (Respirable fraction.)	1317-65-3	5 mg/m3 (TWA)	1989	OSHA Z1A
Calcium carbonate (Total dust.)	1317-65-3	15 mg/m3 (TWA)	1989	OSHA Z1A
Calcium carbonate (Total dust.)	1317-65-3	15 mg/m3 (TWA)	06 2008	TN OEL
Calcium carbonate (Respirable fraction.)	1317-65-3	5 mg/m3 (TWA)	06 2008	TN OEL
Calcium carbonate	1317-65-3	5ug/m3 (AN ESL)	03 2014	TX ESL
Calcium carbonate	1317-65-3	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 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 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	multicolored
Physical State	granular
Odor	Sour
Odour Threshold	no data available
pH	6.21 at 1 %
Vapor Pressure	not applicable
Vapor Density (Air = 1)	not applicable
Bulk density	48.6 lb/ft³ (tap)
Evapouration rate	not applicable
Boiling Point	not applicable
Melting / Freezing Point	not applicable
Water solubility	soluble
Minimum Ignition Energy	not applicable
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	not applicable
Viscosity	not applicable
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available

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. When added to water / aqueous solutions, the temperature of the solution drops.
Conditions to avoid	no data available
Incompatible materials	Oxidizers
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin Absorption, Ingestion, Eye contact, Inhalation
Immediate Effects	
Eye	Minor eye irritation may occur.
Skin	Harmful if absorbed through skin.
Ingestion	Harmful if swallowed.
Inhalation	Dusts may cause upper respiratory tract irritation, coughing.
Information on toxicological effects	
Acute oral toxicity	LD50 (rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (rat) > 2.19 mg/l Exposure time: 4 h Determined in the form of dust. highest concentration tested No deaths
Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg
Skin irritation	Slight irritation (rabbit)
Eye irritation	Practically non-irritating (rabbit)
Sensitisation	Non-sensitizing. (mouse)

Assessment repeated dose toxicity

Indaziflam caused neurobehavioral effects and/or neuropathological changes in subchronic studies in rats and dogs.
Dicamba did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

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

Assessment carcinogenicity

Indaziflam was not carcinogenic in lifetime feeding studies in rats and mice.
Dicamba was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Indaziflam 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 Indaziflam is related to parental toxicity.
Dicamba did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Indaziflam did not cause developmental toxicity in rats and rabbits.
Dicamba did not cause developmental toxicity in rats and rabbits.

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	no data available
Toxicity to aquatic invertebrates	no data available
Toxicity to aquatic plants	no data available
Biodegradability	Indaziflam: not rapidly biodegradable Dicamba: not rapidly biodegradable
Koc	Indaziflam: Koc: 496 Dicamba: Koc: 5.1

Bioaccumulation	Indaziflam: Bioconcentration factor (BCF) 66 Does not bioaccumulate. Dicamba: Bioconcentration factor (BCF) 15 Does not bioaccumulate.
Mobility in soil	Indaziflam: Moderately mobile in soils Dicamba: Highly mobile in soils
Environmental precautions	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. Apply this product as specified on the label. Sweeping any product that lands on a driveway, sidewalk or street, back to the treated area of the lawn will help prevent run off to water bodies or drainage systems.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose of contents/container in accordance with local regulation. Never place unused product down any indoor or outdoor drain.
Contaminated packaging	Do not re-use empty containers. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.
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

DOT CLASSIFICATION:

Not Regulated.

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN 3077, Environmentally hazardous substances, solid, N.O.S. (Bifenthrin), 9, PGIII, marine pollutant

IATA (air): UN 3077, Environmentally hazardous substances, solid, N.O.S. (Bifenthrin), 9, PGIII, marine pollutant

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 92564-82

US Federal Regulations

TSCA list

Urea	57-13-6
Potassium sulfate	7778-80-5
Sulfur	7704-34-9

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

Dicamba	1918-00-9	1.0%
Bifenthrin	82657-04-3	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.

US State Right-To-Know Ingredients

Dicamba	1918-00-9	CA, CT, IL, NJ, RI
Urea	57-13-6	MN
Sulfur	7704-34-9	CA, CT

Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
Dicamba 1918-00-9
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 or absorbed through skin.
Slight eye irritation.
Avoid contact with skin, eyes and clothing.
Remove and wash contaminated clothing before re-use.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
CAS-Nr.	Chemical Abstracts Service number

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 - 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: New Issue

Date of Previous Revision: N/A

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