

**BIOADVANCED SCIENCE-BASED SOLUTIONS
ALL-IN-ONE LAWN WEED &
CRABGRASS KILLER I CONCENTRATE**

Version 1.0 / USA
102000015602

1/11
Revision Date: 05/01/2017

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

Product identifier

Trade name BIOADVANCED SCIENCE-BASED SOLUTIONS ALL-IN-ONE
LAWN WEED & CRABGRASS KILLER I CONCENTRATE

Product code (UVP) 06033724

SDS Number 102000015602

EPA Registration No. 92564-42

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

Use Herbicide

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 no.

Emergency Telephone Number (24hr/ 7 days) 1-800-587-2654 (24 hr/ 7 days)

Product Information Telephone Number 1-800-331-2867

SDS Information or Request SDS@corp.sbm-company.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation: Category 2A

Acute toxicity(Inhalation): Category 4

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

Hazard statements

Causes serious eye irritation.

Harmful if inhaled.

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Precautionary statements

Wash thoroughly after handling.
Wear eye protection/ face protection.
Avoid breathing mist and spray.
Use only outdoors or in a well-ventilated area.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
2,4-D, dimethylamine salt	2008-39-1	4.85
Quinclorac	84087-01-4	1.61
Dicamba, dimethylamine salt	2300-66-5	0.45

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.

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Most important symptoms and effects, both acute and delayed

Symptoms Inhalation may provoke the following symptoms:, Burning sensation, discomfort in the chest, Cough, Dizziness
Ingestion may provoke the following symptoms:, Vomiting, discomfort in the chest, Abdominal pain, Diarrhoea

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 Foam, Carbon dioxide (CO₂), Dry chemical, Water

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 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

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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. Do not allow product to contact non-target plants.

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. Use only in area provided with appropriate exhaust ventilation.

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 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

2,4-D, dimethylamine salt	2008-39-1	2ug/m3 (AN ESL)	07 2011	TX ESL
2,4-D, dimethylamine salt	2008-39-1	20ug/m3 (ST ESL)	07 2011	TX ESL

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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 Tightly fitting safety goggles

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	light beige to brown
Physical State	opaque liquid
Odor	mild sweet
Odour Threshold	No data available
pH	7.0 - 8.5 at 100 %
Vapor Pressure	2.266 kPa / 17 mm Hg at 20 °C
Vapor Density (Air = 1)	No data available
Density	1.02 g/cm ³ at 20 °C
Evaporation rate	No data available
Boiling Point	> 100 °C / 212 °F
Melting / Freezing Point	< 1.7 °C / 35.06 °F
Water solubility	miscible
Minimum Ignition Energy	Not applicable
Decomposition temperature	Not applicable
Partition coefficient: n-octanol/water	Not applicable
Viscosity	4.3 mPaxs
Flash point	> 93.3 °C

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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 recommended storage conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	freezing
Incompatible materials	Acids
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Skin contact, Inhalation, Eye contact
Immediate Effects	
Eye	Moderate eye irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Ingestion	Harmful if swallowed.
Inhalation	May be harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (Rat) > 2,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 2.04 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.
Acute dermal toxicity	LD50 (Rabbit) > 2,000 mg/kg
Skin irritation	Moderate skin irritation. (Rabbit)
Eye irritation	Minimally irritating. (Rabbit)
Sensitisation	Non-sensitizing. (Guinea pig)

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Assessment repeated dose toxicity

2,4-D dimethylamine salt did not cause specific target organ toxicity in experimental animal studies.
Quinclorac did not cause specific target organ toxicity in experimental animal studies.
Dicamba did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

2,4-D dimethylamine salt was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Quinclorac 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

2,4-D was not carcinogenic in lifetime feeding studies in rats and mice.
Quinclorac 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

2,4-D did not cause reproductive toxicity in a two-generation study in rats.
Quinclorac did not cause reproductive toxicity in a two-generation study in rats.
Dicamba did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

2,4-D dimethylamine salt caused developmental toxicity only at dose levels toxic to the dams.
Quinclorac 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

Biodegradability

2,4-D dimethylamine salt:
Not rapidly biodegradable
Quinclorac:
Not rapidly biodegradable

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	Dicamba: Not rapidly biodegradable
Koc	2,4-D dimethylamine salt: Koc: 72 - 471 Quinclorac: Koc: 13 - 54 Dicamba: Koc: 5.1
Bioaccumulation	2,4-D dimethylamine salt: Bioconcentration factor (BCF) 0.1 Does not bioaccumulate. Quinclorac: Does not bioaccumulate. Dicamba: Does not bioaccumulate.
Mobility in soil	2,4-D dimethylamine salt: Moderately mobile in soils Quinclorac: 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. Drift or runoff from treated areas may adversely affect non-target plants. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Never place unused product down any indoor or outdoor drain.
Contaminated packaging	Do not re-use empty containers. Place empty container in trash. Follow advice on product label and/or leaflet.
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

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UN number **3082**
Class **9**
Packaging group **III**
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID,
N.O.S.
(2,4-D DIMETHYLAMINE SALT)**
RQ **Reportable Quantity is reached with 2,061 lb of product.**
IMDG **Not dangerous goods / not hazardous material**
IATA **Not dangerous goods / not hazardous material**

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. 92564-42
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
Dicamba, dimethylamine salt 2300-66-5 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
2,4-D, dimethylamine salt 2008-39-1 CT, IL, RI
Dicamba, dimethylamine salt 2300-66-5 NJ, RI

Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
2,4-D, dimethylamine salt 2008-39-1
Clean Water Section 307 Priority Pollutants
None.

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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.
Moderate eye irritation.
Avoid contact with skin, eyes and clothing.

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 - 2 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: New company name and new EPA registration number.

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Date of Previous Revision: N/A

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