



**BIOADVANCED SCIENCE-BASED  
SOLUTIONS SEASON LONG WEED  
CONTROL FOR LAWNS CONCENTRATE**

Version 1.0 / USA  
102000021162

**2/11**

Revision Date:

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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.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Hazardous Component Name</b>	<b>CAS-No.</b>	<b>Concentration % by weight</b>
2,4-D, dimethylamine salt	2008-39-1	4.73
Dicamba, potassium salt	10007-85-9	0.52
Mecoprop-P potassium salt	66423-05-0	1.10
Isoxaben	82558-50-7	2.63
Glycerine	56-81-5	8.35
Potassium hydroxide	1310-58-3	0.30

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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** Fight fire from upwind position. Keep out of smoke. 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** no data available

**Autoignition temperature** not applicable

**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.

**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** 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.

**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
2,4-D, dimethylamine salt	2008-39-1	20ug/m3 (ST ESL)	07 2011	TX ESL
2,4-D, dimethylamine salt	2008-39-1	2ug/m3 (AN ESL)	07 2011	TX ESL
Glycerine (Respirable fraction.)	56-81-5	5 mg/m3 (PEL)	02 2006	OSHA Z1
Glycerine (Total dust.)	56-81-5	15 mg/m3 (PEL)	02 2006	OSHA Z1
Glycerine (Total dust.)	56-81-5	10 mg/m3 (TWA)	1989	OSHA Z1A
Glycerine (Respirable fraction.)	56-81-5	5 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 (Vapor.)	56-81-5	1000ug/m3 (ST ESL)	02 2013	TX ESL
Glycerine	56-81-5	50ug/m3	02 2013	TX ESL

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(Particulate.)		(ST ESL)		
Glycerine (Vapor.)	56-81-5	100ug/m3 (AN ESL)	02 2013	TX ESL
Glycerine (Particulate.)	56-81-5	5ug/m3 (AN ESL)	02 2013	TX ESL
Potassium hydroxide	1310-58-3	2 mg/m3 (CEILING)	02 2012	ACGIH
Potassium hydroxide	1310-58-3	2 mg/m3 (REL)	2010	NIOSH
Potassium hydroxide	1310-58-3	2 mg/m3 (CEILING)	1989	OSHA Z1A
Potassium hydroxide	1310-58-3	2 mg/m3 (CEILING)	06 2008	TN OEL
Potassium hydroxide (Particulate.)	1310-58-3	20ug/m3 (ST ESL)	02 2013	TX ESL
Potassium hydroxide (Particulate.)	1310-58-3	2ug/m3 (AN ESL)	02 2013	TX ESL
Potassium hydroxide	1310-58-3	2 mg/m3 (CEILING)	08 2010	US CA OEL

**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**

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

**Physical State** liquid

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<b>Odor</b>	mild
<b>Odour Threshold</b>	no data available
<b>pH</b>	6.5 - 7.5 at 100 %
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.05 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>	soluble
<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 - 500 cps
<b>Flash point</b>	no data available
<b>Autoignition temperature</b>	not applicable
<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**

**Reactivity**

<b>Thermal decomposition</b>	not applicable
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Conditions to avoid</b>	no data available
<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>	
<b>Eye</b>	Moderate eye irritation.
<b>Skin</b>	Harmful if absorbed through skin. May cause slight irritation.
<b>Ingestion</b>	Harmful if swallowed.

**Information on toxicological effects**

<b>Acute oral toxicity</b>	LD50 (rat) > 2,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (rat) > 2.06 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.  LC50 (rat) > 8.24 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 (rabbit) > 2,000 mg/kg
<b>Skin irritation</b>	Slight irritation (rabbit)
<b>Eye irritation</b>	Mild eye irritation. (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (guinea pig)

**Assessment repeated dose toxicity**

2,4-D dimethylamine salt did not cause specific target organ toxicity in experimental animal studies.  
Dicamba did not cause specific target organ toxicity in experimental animal studies.  
Mecoprop-P 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.  
Dicamba was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Mecoprop-P was not mutagenic or genotoxic based on the overall weight of evidence 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.  
Dicamba was not carcinogenic in lifetime feeding studies in rats and mice.  
Mecoprop-P caused an increased incidence of tumours in in the following organ(s): . The mechanism that triggers these tumours is not relevant to humans.

**ACGIH**

None.

**NTP**

None.

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**IARC**

None.

**OSHA**

None.

**Assessment toxicity to reproduction**

2,4-D 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.  
Mecoprop-P 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.  
Dicamba did not cause developmental toxicity in rats and rabbits.  
Mecoprop-P caused developmental toxicity only at dose levels toxic to the dams. Mecoprop-P caused a delayed foetal growth.

**Further information**

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

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**SECTION 12: ECOLOGICAL INFORMATION**

**Biodegradability**

2,4-D dimethylamine salt:  
not rapidly biodegradable  
Dicamba:  
not rapidly biodegradable  
Mecoprop-P:  
rapidly biodegradable

**Koc**

2,4-D dimethylamine salt: Koc: 72 - 471  
Dicamba: Koc: 5.1  
Mecoprop-P: Koc: 20 - 43

**Bioaccumulation**

2,4-D dimethylamine salt: Bioconcentration factor (BCF) 0.1  
Does not bioaccumulate.  
Dicamba: Bioconcentration factor (BCF) 15  
Does not bioaccumulate.  
Mecoprop-P: Bioconcentration factor (BCF) 3  
Does not bioaccumulate.

**Mobility in soil**

2,4-D dimethylamine salt: Moderately mobile in soils  
Dicamba: Highly mobile in soils  
Mecoprop-P: 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.



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Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.  
Do not apply when weather conditions favor runoff or drift.  
Apply this product as specified on the label.

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**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.  
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.

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**SECTION 14: TRANSPORT INFORMATION**

**49CFR**

UN number	<b>3082</b>
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 2,114 lb of product.

**IMDG**

UN number	<b>3082</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOXABEN SOLUTION)

**IATA**

UN number	<b>3082</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES

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Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(ISOXABEN 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.** 92564-43

**US Federal Regulations**

**TSCA list**

Glycerine 56-81-5

Potassium hydroxide 1310-58-3

**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**

None.

**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
Glycerine	56-81-5	MN
Potassium hydroxide	1310-58-3	CA, CT, IL, MN, NJ, RI

**Canadian Regulations**

**Canadian Domestic Substance List**

Glycerine	56-81-5
Potassium hydroxide	1310-58-3

**Environmental**

**CERCLA**

2,4-D, dimethylamine salt	2008-39-1	
Potassium hydroxide	1310-58-3	1,000 lbs

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**



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**European Inventory of Existing Commercial Substances (EINECS)**

Glycerine 56-81-5  
Potassium hydroxide 1310-58-3

**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 swallowed or absorbed through skin.  
Moderate eye irritation.  
Avoid contact with skin, eyes and clothing.

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**SECTION 16: OTHER INFORMATION**

**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.