BIOADVANCED SCIENCE-BASED SOLUTIONS SEASON LONG WEED KILLER CONCENTRATE

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

Product identifier	
Trade name	BIOADVANCED SCIENCE-BASED SOLUTIONS SEASON LONG WEED KILLER CONCENTRATE
Product code	21NAHER231
SDS Number	92564-88
EPA Registration No.	

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. 11000 Weston Parkway Suite 150 Cary, NC 27513 United States
Responsible Department	
Emergency telephone no.	
Emergency Telephone Number (24hr/ 7 days)	1-877-229-3763 (24 hr/ 7 days)
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

Eye irritation: Mildly irritating Category III
Skin irritation: Slightly irritating, Category III
Acute toxicity (Inhalation): Category IV
Acute toxicity (Oral): Category III

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Caution

Hazard statements
Causes moderate eye irritation.
Harmful if inhaled.
Harmful if swallowed

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
Penoxsulam	219714-96-2	0.10
Dicamba	1918-00-9	0.44
Dithiopyr	97886-45-8	1.10

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	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	> 100.0°C
Auto-ignition 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	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

None Specified

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	White
Physical State	Opaque liquid
Odor	Rubber like
Odour Threshold	No data available
pH	3.36 (neat)
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Density	0.998 g/cm³ at 20 °C
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available
Water solubility	miscible
Minimum Ignition Energy	Not applicable
Decomposition temperature	Not applicable
Partition coefficient: n-octanol/water	Not applicable
Viscosity	1.88 cSt at 20 C 1.24 cSt at 30 C
Flash point	> 100.0 °C (closed cup)

Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not shock sensitive

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	None known
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	Mild 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) 3,129 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 2.02 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.
Acute dermal toxicity	LD50 (Rat) > 5,000 mg/kg
Skin irritation	Slight skin irritation. (Rabbit)
Eye irritation	Mildly irritating. (Rabbit)
Sensitisation	Non-sensitizing. (Mouse)

Assessment repeated dose toxicity

No Data reported

Assessment mutagenicity

No Data reported

Assessment carcinogenicity

No Data Reported

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

No Data reported

Assessment developmental toxicity

No Data reported

Further information

None

SECTION 12: ECOLOGICAL INFORMATION

Biodegradability No Data reported

Koc No Data reported

Bioaccumulation No Data reported

Mobility in soil No Data reported

Penoxsulam Toxicity

Acute toxicity to fish

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants
ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 0.126 mg/l, OECD Test Guideline 201

EbC50, Lemna minor (duckweed), 14 d, Biomass, 0.00329 mg/l, OECD 221.

Toxicity to bacteria
EC50, activated sludge, 3 Hour, > 1,000 mg/l

Dithiopyr Toxicity

Acute toxicity to fish
Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 0.48 mg/l

Acute toxicity to aquatic invertebrates
LC50, saltwater mysid Mysidopsis bahia, 0.586 mg/l

EC50, eastern oyster (Crassostrea virginica), 0.168 mg/l

LC50, Americamysis bahia (Opossum shrimp), > 0.221 mg/l

Acute toxicity to algae/aquatic plants
ErC50, blue-green alga Anabaena flos-aquae, 72 Hour, > 0.66 mg/l

ErC50, Lemna gibba (gibbous duckweed), 7 d, 0.014 mg/l

NOEC, Lemna gibba (gibbous duckweed), 7 d, 0.0024 mg/l

EC50, Selenastrum capricornutum (green algae), Static, 5 d, 0.020 mg/l

Toxicity to Above Ground Organisms
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).
Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

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

UN number	Not Regulated
Class	
Packaging group	
Proper shipping name	
RQ	
IMDG	Not Regulated
IATA	Not Regulated

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. 92564-88
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
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
None

Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
None.
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.
Slight 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 - 1 Flammability - 0 Instability - 0 Others - none

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

Health - 1 Flammability - ð Physical Hazard - 0 PPE - 1

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Issue

Date of Previous Revision: Not Applicable

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