BIOADVANCED SCIENCE-BASED SOLUTIONS EXTENDED CONTROL BRUSH KILLER READY-TO-SPRAY

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

Product identifier

Trade name BIOADVANCED SCIENCE-BASED SOLUTIONS EXTENDED CONTROL BRUSH KILLER READY-TO-SPRAY

Product code

SDS Number 16HER020

EPA Registration No. 92564-80

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

Use Herbicide

Restrictions on use See product label for restrictions.

Information on manufacturer

SBM Life Science Corp.
11000 Weston Parkway
Ste 150 Cary, NC 27513
United States

Emergency telephone no.

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

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards
Contains sensitizing substance. May produce an allergic reaction



SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Triclopyr, triethylamine salt	57213-69-1	8.8
Phosphate Ester	73038-25-2	6

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	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.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Water spray, Foam, Carbon dioxide (CO2), 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.
	no data available
Flash point	>110 C
Autoignition 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	Maintain exposure levels below the exposure limit through the use of general and local 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. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Keep containers tightly closed in a dry, cool and well-ventilated place. 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 feeding stuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Triclopyr, triethylamine salt	57213-69-1	40ug/m3 (ST ESL)	07 2011	TX ESL
Triclopyr, triethylamine salt	57213-69-1	4ug/m3 (AN ESL)	07 2011	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 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	Pale Amber color
Physical State	liquid, clear
Odor	Ammonia-Like
Odour Threshold	no data available
pH	9.7 (1% solution)
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	ca. 1.055 g/cm³ at 26 °C
Evapouration rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	dispersible
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Flash point	> 110 °C
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Viscosity	2.63 Centipoise at 26C

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.
Conditions to avoid	no data available
Incompatible materials	no data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Inhalation, Skin contact, Skin Absorption
Immediate Effects	
Eye	Moderate eye irritation.
Skin	Harmful if absorbed through skin.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 (female rat) >5,000 mg/kg
Acute inhalation toxicity	LC50 (rat) > 2.05 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual)
	LC50 (rat) > 20.06 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50. (actual)
Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg
Skin irritation	Slightly Irritating (rabbit)
Eye irritation	Moderate eye irritation (rabbit)
Sensitisation	Sensitizing (mouse) Class 1B

Assessment repeated dose toxicity

Triclopyr did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

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

Assessment carcinogenicity

Triclopyr was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Triclopyr did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Triclopyr caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Triclopyr are related to maternal toxicity.

Further information

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

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 400 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient triclopyr.
Toxicity to aquatic invertebrates	LC50 (Daphnia magna (Water flea)) > 1,000 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient triclopyr. EC50 (Crassostrea virginica (Eastern Oyster)) 55 - 87 mg/l shell deposition; Exposure time: 48 h The value mentioned relates to the active ingredient triclopyr.
Biodegradability	Triclopyr: not rapidly biodegradable
Koc	Triclopyr: Koc: 25 - 384
Bioaccumulation	Triclopyr: Bioconcentration factor (BCF) 1 Does not bioaccumulate.
Mobility in soil	Triclopyr: Mobile in soils

Environmental precautions Do not allow to get into surface water, drains and ground water.

Do not apply when weather conditions favor runoff or drift.
Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
Apply this product as specified on the label.
Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product Dispose in accordance with all local, state/provincial and federal regulations.
Follow container label instructions for disposal of wastes generated during use in compliance with the product label.
Do not contaminate water, food, or feed by disposal.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: COMPOUNDS, TREE OR WEEDKILLING, N.O.I., other than poison; HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

BIOADVANCED SCIENCE-BASED SOLUTIONS EXTENDED CONTROL BRUSH KILLER READY-TO-SPRAY

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

EPA Registration No. 92564-80
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

Triclopyr, triethylamine salt	57213-69-1	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

Triclopyr, triethylamine salt	57213-69-1	NJ, RI

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, inhaled or absorbed through the skin.
Avoid breathing spray mist.
Avoid contact with skin, eyes and clothing.
Moderate eye irritation.
Contains sensitizing substance, may produce an allergic reaction

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

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	International Agency for Research on Cancer
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

Reason for Revision: New Issue

Date of Previous Revision: Not Applicable

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.