

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: Biox[®]-15EC Line Spray **EPA Exempt 25(b)**
Product Code: 10251
Product Use: Potato Sprout Control
Product Restrictions: For Agriculture Use Only
Manufacturer/Importer/Supplier/Distributor information
Manufacturer: Pace International, LLC
Address: 5661 Branch Road, Wapato, WA 98951
Phone Number: 800-936-6750 (Monday-Friday, 7:00 a.m. – 4:00 p.m.)
Medical Emergency Phone Number: 888-271-4649 (PROPHARMA/PROSAR)
Transportation Emergency Phone Number: 800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

GHS Classification in accordance with 29 CFR 1910 (2012 OSHA Hazard Communication Standard)
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification:
Physical Hazards, Not classified
Health Hazards
Skin corrosion / irritation, Category 2
Serious eye damage / eye irritation, Category 2
Skin Sensitization, Category 1
Aspiration Hazard, Category 1

Hazard Symbols:



Signal Word:
DANGER

Hazard Statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H304 May be fatal if swallowed and enters airways.

Other Hazards:
Hazard(s) not otherwise classified (HNOC):

Supplemental information

Precautionary Statements:
Prevention Statements:
P264 Wash hands thoroughly after handling.
P280 Wear protective clothing, chemical resistant gloves, and safety glasses. Fogging applicators must wear a NIOSH-approved full-face respirator with organic vapor filter.
P261 Avoid breathing fume/gas/mist/vapors/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.

Response Statements:
P302/352 IF ON SKIN: Wash with plenty of soap and water.
P333/313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatments see Section 4 First Aid Measures on SDS.
P362/364 Take off contaminated clothing and wash it before reuse.
P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337/313 If eye irritation persists: Get medical advice/attention.
P304/340 IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P301/310 IF SWALLOWED: Immediately call a POISON CENTER/doctor for treatment advice.
P331 Do NOT induce vomiting.

Storage Statements:
P403/233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal Statements:
P501 Dispose of contents/container should be made in accordance with applicable regional, national and local laws and regulations.
None known.
None known.

The product is exempt from FIFRA regulation under 40 CFR 152.25(f) and is considered a minimum risk pesticide.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS #	Concentration (w/w %)
Oils, clove	8000-34-8	15%
Glycerol	56-81-5	60 – 80%*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments: *US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.



4. FIRST AID MEASURES

General Advice:	Have the product container, label or Safety Data Sheet with you when calling a poison control center or physician, or going for treatment. You may also contact PROPHARMA (PROSAR) 1-888-271-4649 for emergency medical treatment information.
Skin contact:	IF ON SKIN: Take off immediately all contaminated clothing. Wash skin with plenty of soap and water/shower for 15 – 20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact:	IF IN EYES: Hold eye open and cautiously rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses if present and easy to do after the first 5 minutes, then continue rinsing eye. If eye irritation persists: Get medical advice/attention.
Ingestion:	IF SWALLOWED: Immediately call a POISON CENTER or doctor for medical advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Inhalation:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call a POISON CENTER/doctor if you feel unwell.
Most important Symptoms / effects, acute and Delayed:	Aspiration may cause pulmonary oedema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation., May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of any immediate medical attention and special treatment needed:	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide.
Unsuitable Extinguishing Media:	Do not use water jet as an extinguisher, as this will spread the fire.
Special Hazards Arising from the Chemical:	During fire, gases hazardous to health may be formed.
Hazardous combustion products:	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.
Special protective equipment and precautions for firefighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions:	Move containers from fire area if you can do so without risk.
Specific methods:	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards:	No unusual fire or explosion hazards noted.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up:	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions:	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. For waste disposal, see section 13 of the SDS.



7. HANDLING & STORAGE

Precautions for safe handling:	Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Do not eat, drink or smoke when using this product.
Conditions for safe storage, including any incompatibilities:	Biox [®] -15EC and the emulsified solution (once completely mixed) can be stored at room temperature. Store in a well-ventilated space. Store locked up. Keep container tightly closed and upright to prevent leakage and contamination. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children and livestock. This product temporarily inhibits germination of seed potatoes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:			
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)			
Components	Type	Value	Form
Glycerol (CAS 56-81-5)	PEL	5mg/m3 15 mg/m3	Respirable fraction. Total dust.
Biological limit values	No biological exposure limits noted for the ingredient(s).		
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Wear safety glasses with side shields (or goggles). Eye wash station and washing facilities should be available.		
Skin protection	Impervious gloves. Confirm with reputable supplier first.		
Hand protection	Wear appropriate chemical resistant clothing. As required by employer code.		
Other	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134)		
Respiratory protection	Not applicable.		
Thermal hazards	Not applicable.		
General hygiene considerations	Use good industrial hygiene practices in handling this material. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.		

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Liquid	Upper/Lower flammability limits:	Not available
Appearance / Color:	Yellow	Vapor pressure:	Not available
Odor:	Clove	Vapor density: (air =1)	Not available
Odor threshold:	Not available	Specific Gravity: (H₂O = 1)	1.165 – 1.185
pH:	8.5 - 9.5	Solubility:	Dispersible
Melting/Freezing point:	Not available	Partition coefficient (n-octanol-water):	Not available
Pour Point:	Not available	Auto-ignition temperature:	Not available
Initial boiling point and boiling range:	Not available	Decomposition temperature:	Not available
Flash point:	Not available	Viscosity:	Not available
Evaporation rate:	Not available	Explosive properties:	Not explosive
Flammability (solid, gas):	Not applicable	Oxidizing properties:	Not oxidizing

10. STABILITY & REACTIVITY

Reactivity hazards:	This product may react with strong oxidizing agents.
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Material is stable under normal conditions.
Conditions to avoid:	Avoid heat, sparks, open flames and other ignition sources. Do not mix with other chemicals.



Incompatible materials:
Hazardous decomposition products:

Strong oxidizing agents.
May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.	
Information on likely routes of exposure		
Inhalation	May cause irritation to the respiratory system.	
Skin corrosion / irritation:	Causes skin irritation. May cause an allergic skin reaction.	
Eye damage / irritation:	Causes serious eye irritation.	
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. May cause stomach distress, nausea or vomiting.	
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.	
Information on toxicological effects	May be fatal if swallowed and enters airways.	
Components	Species	Test Results
Glycerol (CAS# 56-81-5)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	56750 mg/kg, ECHA
<i>Inhalation</i>		
LC50	Rat	275000 mg/m3, 4 hours, ECHA
<i>Oral</i>		
LD50	Rat	11500 mg/kg, ECHA
Oils, clove (CAS# 8000-34-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	5000 mg/kg, RTECS
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	2650 mg/kg, RTECS
Skin corrosion/irritation:	Causes skin irritation.	
Exposure minutes	Not available	
Erythema value	Not available	
Oedema value	Not available	
Serious eye damage/eye irritation:	Causes serious eye irritation.	
Corneal opacity value	Not available	
Iris lesion value	Not available	
Conjunctival reddening value	Not available	
Conjunctival oedema value	Not available	
Recover days	Not available	
Respiratory sensitization:	Not a respiratory sensitizer.	
Skin sensitization:	May cause an allergic skin reaction.	
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity:	See below.	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	Not listed	
Reproductive toxicity:	This product is not expected to cause reproductive or developmental effects.	
Teratogenicity:	Not available.	
Specific target organ toxicity - single exposure:	May cause respiratory irritation.	
Specific target organ toxicity - repeated exposure:	Not classified.	
Aspiration hazard:	May be fatal if swallowed and enters airways.	



12. ECOLOGICAL INFORMATION

Ecotoxicity	See below		
Ecotoxicological data			
Components	Species	Test Results	
Glycerol (CAS# 56-81-5)			
Aquatic			
Fish LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	51000 – 57000 mg/L, 96 hours	
Persistence/ degradability:	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil:	No data available.		
Mobility in general:	Not available.		
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. DISPOSAL CONSIDERATIONS

Disposal instructions:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal Regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code:	This product, in its original form and concentration, would not designate as a US federal hazardous waste when disposed
Waste from residues / unused products:	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging:	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)	Not regulated as dangerous goods.
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15. REGULATORY INFORMATION

US FEDERAL REGULATIONS	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
	This product is exempt from FIFRA regulation under 40 CFR 152.25(F) and is considered a minimum risk pesticide.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.
SARA 304 Emergency Release Notification	Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	Yes
Classified Hazard Categories	Skin corrosion or irritation Serious eye damage or eye irritation. Respiratory or skin sensitization. Aspiration hazard.
SARA 313 (TRI reporting)	Not regulated.
OTHER FEDERAL REGULATIONS	
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.



**US STATE
REGULATIONS**

US - Minnesota Haz Subs: Listed substance

Glycerol (CAS# 56-81-5) Listed

US - Texas Effects Screening Levels: Listed substance

Glycerol (CAS# 56-81-5) Listed

Oils, clove (CAS# 8000-34-8) Listed

US. Massachusetts RTK - Substance List

Glycerol (CAS# 56-81-5) Listed

US. New Jersey Worker and Community Right-to-Know Act

Glycerol (CAS# 56-81-5) Listed

US. Pennsylvania Worker and Community Right-to-Know Law

Glycerol (CAS# 56-81-5) Listed

US. Rhode Island RTK

Glycerol (CAS# 56-81-5) Listed

US. California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

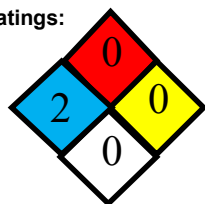
HMIS Ratings:

Health – 2

Flammability – 0

Reactivity – 0

NFPA Ratings:



The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, Pace International, LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, neither Pace International, LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. It is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Pace International, LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information are set forth on the labeling and the SDS.

SDS preparation date: May 31, 2021

Replaces MSDS dated: August 19, 2020

Changes since last revision: Several GHS updates through-out SDS all sections.

Version: 3

