

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: Biox[®]-40EC Line Spray **EPA Exempt 25(b)**
Product Code: 10329
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, Flammable liquid,
Category 3 – Combustible liquid
Health Hazards
Skin corrosion / irritation, Category 2
Serious eye damage / eye irritation,
Category 2
Skin Sensitization, Category 1
Specific Target Organ Toxicity –single
exposure, Category 3 respiratory tract
irritation
Aspiration Hazard, Category 1

Hazard Symbols:



Signal Word:
DANGER

Hazard Statements:

H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin
reaction.
H304 May be fatal if swallowed and
enters airways.
H335 May cause respiratory irritation.

Other Hazards:

**Hazard(s) not otherwise classified
(HNOC):**

Precautionary Statements:

Prevention Statements:

P210 Keep away from heat / hot surfaces / sparks / open flames / and
other ignition sources. No smoking
P233 Keep container tightly closed
P240 Ground/Bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilating / lighting / and process
equipment.
P242 Use non-sparking tools.
P243 Take precautionary measures against static discharge.
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.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the
workplace.

Response Statements:

P370/378 In case of fire: Use dry chemical, CO₂ to extinguish.
P303/361/353 IF ON SKIN (or hair): Take off immediately all
contaminated clothing. Rinse skin with water/shower.
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:

P403/233/235 Store in a well-ventilated place. Keep container tightly
closed. Keep cool.
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.



Supplemental information

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

<u>Ingredient</u>	<u>CAS #</u>	<u>Concentration (w/w %)</u>
Glycerol	56-81-5	10 – 30%*
Isopropanol	67-63-0	5 – 10%*
Oils, clove	8000-34-8	30 – 60%*

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 (or hair): 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:	Flammable liquid and vapor.



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.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions:

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:

Store locked up. Keep container tightly closed and upright when not in use. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children and livestock.

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	Respirable fraction.
		15 mg/m3	Total dust.
Isopropanol (CAS# 67-63-0)	PEL	980 mg/m3	
		400 ppm	

US. ACGIH Threshold Limit Values

Isopropanol (CAS# 67-63-0)	STEL	400 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Isopropanol (CAS# 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm

Biological limit values

See below

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS# 67-63-0)	40 mg/L	Acetone	Urine	*

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

Hand protection

Impervious gloves. Confirm with reputable supplier first.

Other

Wear appropriate chemical resistant clothing. As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a



Thermal hazards
General hygiene considerations

trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134)
Not applicable.
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)	1.01 – 1.03
pH:	8.0 - 9.0	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:	40.3° C (104.5° F)	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:	Strong oxidizing agents.
Hazardous decomposition products:	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



Isopropanol (CAS# 67-63-0)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	13900 mg/kg, ECHA
<i>Inhalation</i>		
LC50	Rat	25000 mg/m3, 6 hours, ECHA 16970 mg/l/4h, HMIRA
<i>Oral</i>		
LD50	Rat	5840 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	Causes serious eye irritation.	
Irritation:		
Corneal opacity value	Not available	
Iris lesion value	Not available	
Conjunctival reddening	Not available	
value		
Conjunctival oedema	Not available	
value		
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 -	May cause respiratory irritation.	
single exposure:		
Specific target organ toxicity -	Not classified.	
repeated exposure:		
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 (Oncorhynchus mykiss)	51000 – 57000 mg/L, 96 hours	
Isopropanol (CAS# 67-63-0)			
Algae IC50	Algae	1000 mg/L , 72 hours	
Crustacea EC50	Daphnia	13299 mg/L 48 hours	
Aquatic			
Fish LC50	Bluegill (Lepomis macrochirus)	>1400 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)	Classification method: Classified according to Part 2, sections 2.1-2.8 of the Regulations for the transport of dangerous goods. If applicable, the technical name and product classification will appear below.
General	US: DOT – 49 CFR 173.150 (F) – Combustible Liquid Exemption
U.S. Department of Transportation (DOT)	
Basic Shipping requirements:	
UN number:	UN1993
Proper shipping name:	Flammable liquids, n.o.s.
Technical name:	Isopropanol
Hazard class(es):	3
Packing group:	III

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)	Isopropanol (CAS# 67-63-0)	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	Flammable (gases, aerosols, liquids, or solids) Skin corrosion or irritation Serious eye damage or eye irritation. Respiratory or skin sensitization. Specific target organ toxicity (single or repeated exposure) Aspiration hazard.
SARA 313 (TRI reporting)		
Chemical name	CAS number	% by wt.
Isopropanol	67-63-0	5 – 10*
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 - California Hazardous Substances (Director's): Listed substance	Isopropanol (CAS# 67-63-0)	Listed.



US - Illinois Chemical Safety Act: Listed substance	Isopropanol (CAS# 67-63-0)	Listed
US - Louisiana Spill Reporting: Listed substance	Isopropanol (CAS# 67-63-0)	Listed
US - Minnesota Haz Subs: Listed substance	Glycerol (CAS# 56-81-5)	Listed
	Isopropanol (CAS# 67-63-0)	Listed
US - Texas Effects Screening Levels: Listed substance	Glycerol (CAS# 56-81-5)	Listed
	Isopropanol (CAS# 67-63-0)	Listed
	Oils, clove (CAS# 8000-34-8)	Listed
US. Massachusetts RTK - Substance List	Glycerol (CAS# 56-81-5)	Listed
	Isopropanol (CAS# 67-63-0)	Listed
US. New Jersey Worker and Community Right-to-Know Act	Glycerol (CAS# 56-81-5)	Listed
	Isopropanol (CAS# 67-63-0)	Listed
US. Pennsylvania Worker and Community Right-to-Know Law	Glycerol (CAS# 56-81-5)	Listed
	Isopropanol (CAS# 67-63-0)	Listed
US. Rhode Island RTK	Glycerol (CAS# 56-81-5)	Listed
	Isopropanol (CAS# 67-63-0)	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 – 2

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: June 7, 2021 **Replaces MSDS dated:** August 19, 2020
Changes since last revision: Several GHS updates through-out SDS all sections. **Version:** 3

