

**SAFETY DATA SHEET**

**1. PRODUCT & COMPANY IDENTIFICATION**

**Product Name:** Biox<sup>®</sup>-40EC Line Spray  
**Product Code:** 10329  
**Product Use:** Potato Sprout Control  
**Supplier:** 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 (PROSAR)  
**Transportation Emergency Phone Number:** 800-424-9300 (CHEMTREC)

**2. HAZARDS IDENTIFICATION**

**Classification:**  
Flammable, Category 4  
Acute Oral, Category 4  
Acute Inhalation, Category 5  
Skin irritation, Category 2  
Eye irritation, Category 2A  
Respiratory Sensitization, Category 1A  
Specific Target Organ Toxicity (single exposure), Category 3  
Specific Target Organ Toxicity (repeated exposure), Category 2  
Aquatic Toxicity, Category 2

**Hazard Symbols:**



**Hazard Statements:**

**DANGER**  
H227 Combustible liquid.  
H302 Harmful if swallowed.  
H333 May be harmful if inhaled.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs (nervous system, mucous membranes, liver, blood forming systems (bone marrow and spleen) through prolonged or repeated exposure.  
H401 Toxic to aquatic life.

**Precautionary Statements:**

**Prevention Statements:**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective clothing, chemical resistant gloves, and safety glasses.  
P260 Do not breathe the mist, vapours, or spray.  
P284 In case of inadequate ventilation wear respiratory protection.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.

**Response Statements:**

P370/378 In case of fire: Use dry chemical, foam, or CO<sub>2</sub> to extinguish.  
P301/312 IF SWALLOWED: Call a POISON CENTER / doctor if you feel unwell.  
P330 Rinse mouth.  
P304/312 IF INHALED: Call a POISON CENTER / doctor if you feel unwell.  
P302/352 IF ON SKIN: Wash with plenty of soap and water.  
P321 Specific treatment See First Aide Section 4.  
P332/313 If skin irritation occurs: Get medical advice/attention.  
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 person to fresh air and keep comfortable for breathing.  
P342/311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor for medical advice.  
P314 Get medical advice/attention if you feel unwell.

**Storage Statements:**

P403/235 Store in a well-ventilated place. Keep cool.  
P233 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.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Ingredient</u>	<u>CAS #</u>	<u>Concentration (w/w %)</u>
Clove Oil	8000-34-8	< 45%
Isopropanol	67-63-0	< 10%
Proprietary food grade ingredients		balance



#### 4. FIRST AID MEASURES

<b>General</b>	Have the product container, label or Safety Data Sheet with you when calling a poison control center or physician, or going for treatment.
<b>Advice:</b>	
<b>If on Skin:</b>	Take off contaminated clothing. Wash skin with plenty of soap and water. If redness, burning, or irritation persists, get medical advice/attention. Wash contaminated clothing before reuse.
<b>If in Eyes:</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. Get medical advice/attention.
<b>If Swallowed:</b>	Call a poison control center or doctor for treatment 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.
<b>If Inhaled:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing Media:</b>	Flammable. Use a dry chemical, foam, or CO <sub>2</sub>
<b>Special Exposure Hazards:</b>	Strong oxidizers.
<b>Special Protective Equipment / Procedures for Firefighters:</b>	Wear self-contained breathing equipment.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Wear protective clothing, chemical resistant gloves, and safety glasses.
<b>Environmental Precautions:</b>	In case of spill isolate area and deny entry to unnecessary personnel. Do not allow product to enter sewers, lakes, streams or other bodies of water.
<b>Containment / Clean-Up Methods:</b>	Stop spill at the source. Construct temporary dikes of dirt, sand, or other appropriate material to prevent spreading of the material. Absorb with an inert material such as sand or vermiculite and place in an appropriate container for disposal.

#### 7. HANDLING & STORAGE

<b>Handling:</b>	Avoid contact with skin and eyes. Good standards of hygiene should be maintained at all times. Smoking, eating, and drinking are prohibited in the work area. For personal protection wear protective clothing, chemical resistant gloves, and safety glasses.
<b>Storage:</b>	Store in a cool, dry area at room temperature, and away from direct sunlight. Keep container tightly closed when not in use. Keep out of reach of children and livestock. Store locked up.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Occupational Exposure Limits:</b>	Clove Oil CAS# 8000-34-8 Not established Isopropanol CAS# 67-63-0 400 ppm (OSHA 8-hr PEL, Cal/OSHA, NIOSH REL) 200 ppm ACGIH TLV
<b>Engineering Controls:</b>	Local exhaust ventilation maybe necessary to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Provide mechanical ventilation for confined spaces.
<b>Personal Protective Equipment :</b>	<b>Clothing:</b> Wear protective clothing and chemical resistant gloves when handling. <b>Eye Protection:</b> Wear safety glasses. Eye fountain and washing facilities should be present at work area. <b>Respiratory Protection:</b> Not normally required. A NIOSH-approved respirator with organic vapor filter may be used in misty environments without proper ventilation.



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**9. PHYSICAL & CHEMICAL PROPERTIES**

<b>Physical state:</b>	Liquid		
<b>Appearance:</b>	Clear yellow liquid	<b>Upper/Lower flammability limits:</b>	Not available
<b>Odor:</b>	Clove spice	<b>Vapor pressure:</b>	Not available
<b>Odor threshold:</b>	Not available	<b>Vapor density: (air =1)</b>	Not available
<b>pH:</b>	8.0 – 10.0	<b>Specific Gravity: (H<sub>2</sub>O = 1)</b>	1.02
<b>Melting/Freezing point:</b>	Not available	<b>Solubility:</b>	Dispersible
<b>Boiling point:</b>	No data available	<b>Partition coefficient (n-octanol-water):</b>	Not available
<b>Flash point:</b>	104.5° F(40° C)	<b>Auto-ignition temperature:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Decomposition temperature:</b>	Not available
<b>Flammability (solid, gas):</b>	Not applicable	<b>Viscosity:</b>	Not available

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**10. STABILITY & REACTIVITY**

<b>Reactivity hazards:</b>	None known
<b>Chemical stability:</b>	Stable at ambient conditions
<b>Conditions to avoid:</b>	Heat and open flames.
<b>Incompatible materials:</b>	Strong oxidizing agents.
<b>Hazardous decomposition products:</b>	Acrid smoke and fumes may form when heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

<b>Acute toxicity:</b>	<b>Acute Oral:</b>	LD <sub>50</sub> (estimate): > 2400 mg/kg	Based on Ingredients
	<b>Acute Dermal:</b>	LD <sub>50</sub> (estimate): > 5000 mg/kg	Based on Ingredients
	<b>Inhalation:</b>	LC <sub>50</sub> (estimate): > 20 mg/L	Based on Ingredients
<b>Skin corrosion/irritation:</b>	Causes skin irritation		
<b>Eye damage/irritation:</b>	Causes serious eye irritation		
<b>Respiratory/Skin sensitization:</b>	May cause respiratory and digestive tract irritation.		
<b>Germ cell mutagenicity:</b>	Not available		
<b>Carcinogenicity:</b>	No carcinogenic effects are expected due to product being comprised of FDA-approved food-grade ingredients.		
<b>Reproductive toxicity:</b>	Occasional workplace exposure is not expected to present a hazard.		
<b>Target organ effects:</b>	With repeated or prolonged exposure Clove oil is known to be toxic to nervous system and mucous membranes.		
<b>Aspiration hazard:</b>	Material does not present an aspiration hazard.		
<b>Potential health effects:</b>	May cause redness and reversible irritation to eyes. May cause skin irritation.		

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**12. ECOLOGICAL INFORMATION**

<b>Toxicity:</b>	LC <sub>50</sub> (96-hr) fish: > 2 mg/L (estimate)	Based on Ingredients
	<b>Acute Toxicity:</b>	<b>Isopropanol</b>
	96 hr LC50 (fathead minnow): > 1000 µl/L	
	48 hr LC50 (golden orfe): 8970 - 9280 mg/L	
	96 hr LC50 (daphnid): > 1000 µl/L	
<b>Persistence/ degradability:</b>	Not available	
<b>Bioaccumulative potential:</b>	Not available	
<b>Mobility in soil:</b>	Not available	
<b>Other adverse effects:</b>	Toxic to aquatic life	

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**13. DISPOSAL CONSIDERATIONS**

<b>Disposal methods:</b>	Recover or recycle if possible. Do not discharge into sewers, lakes, streams, or other bodies of water. Disposal should be made in accordance with applicable regional, national and local laws and regulations. Consult appropriate regulatory officials for information on disposal, keeping in mind that local regulations may be more stringent than regional or national requirements.
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**14. TRANSPORT INFORMATION**

	<u>DOT</u>	<u>IMDG</u>	<u>IATA</u>
<b>Domestic/DOT:</b>	Not regulated-Product is a combustible liquid exempt from DOT hazardous shipping requirements under 49 CFR 173.150(f) when shipped in non-bulk packaging.		
<b>UN number:</b>	Not applicable	UN 1993	Not applicable
<b>Proper shipping name:</b>	Not regulated	Flammable liquid, n.o.s. (Isopropanol)	Not regulated
<b>Hazard class(es):</b>	Not applicable	3	Not applicable
<b>Packing group:</b>	Not applicable	III	Not applicable
<b>Marine Pollutant:</b>	Not applicable		
<b>Special precautions:</b>	None		

**15. REGULATORY INFORMATION**

<b>FIFRA:</b>	Biox-40EC Line Spray qualifies as a “minimum risk pesticide” and is exempt from U.S. EPA registration requirements under section 25(b) of FIFRA.
<b>SARA 313:</b>	Contains no chemicals subject to SARA Title III Section 313 in quantities sufficient to trigger reporting requirements.
<b>TSCA:</b>	All components of this product are included or exempt from inclusion in EPA’s Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
<b>WHMIS:</b>	This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

**16. OTHER INFORMATION**

<b>HMIS Ratings:</b>	Health – 1	Flammability – 2	Reactivity – 0
<b>NFPA Ratings:</b>			

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This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, “Hazcom”). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

<b>SDS preparation date:</b>	May 26, 2015	<b>Replaces MSDS dated:</b>	December 10, 2012
<b>Changes since last revision:</b>	New format to SDS		

