

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: Biox[®]-COMBO **EPA Reg#** 64864-62
Product Code: 10317
Product Use: Liquid CIPC / Clove Oil Sprout Inhibitor System
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:

Acute Oral, Category 4
 Acute Dermal, Category 5
 Acute Inhalation, Category 5
 Skin irritation, Category 2
 Eye irritation, Category 2B
 Respiratory Sensitization, Category 1A
 Skin Sensitization, Category 1A
 Toxic to Reproduction, Category 2
 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
 H302 Harmful if swallowed.
 H313 May be harmful in contact with skin.
 H333 May be harmful if inhaled.
 H315 Causes skin irritation.
 H320 Causes eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H361 Suspected of damaging fertility or the unborn child (stunted fetus).
 H335 May cause respiratory irritation.
 H373 May cause damage to organs (nervous system, mucous membranes, liver, blood forming systems (bone marrow and spleen) through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention Statements:

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. Fogging applicators must wear a NIOSH-approved full-face respirator with organic vapour filter.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe mist, vapours, or spray.
 P271 Use only outdoors or in a well-ventilated area.
 P284 In case of inadequate ventilation wear respiratory protection.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.

Response Statements:

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.
 P332/333/313 If skin irritation or rash 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.
 P308/313 IF exposed or concerned: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 P391 Collect spillage.

Storage Statements:

P405 Store locked up.
 P403/233 Store in a well-ventilated place. Keep container tightly closed.

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>
Chlorpropham	101-21-3	55.4%
Clove Oil	8000-34-8	43.5%
Proprietary food grade ingredients		balance

4. FIRST AID MEASURES

General	Have the product container, label or Safety Data Sheet with you when calling a poison control center or physician, or going for treatment.
Advice:	center or physician, or going for treatment.
If on Skin:	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.
If in Eyes:	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.
If Swallowed:	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.
If Inhaled:	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

Extinguishing Media:	Dry chemical, CO ₂
Special Exposure Hazards:	Strong oxidizers, reacts with zinc and potassium permanganate.
Special Protective Equipment / Procedures for Firefighters:	Wear self-contained breathing equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear protective clothing, chemical resistant gloves, and safety glasses. Fogging applicators must wear a NIOSH-approved full-face respirator with organic vapour filter.
Environmental Precautions:	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.
Containment / Clean-Up Methods:	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

Handling:	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. Fogging applicators must wear a NIOSH-approved full-face respirator with organic vapour filter.
Storage:	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

Occupational Exposure Limits:	Chlorpropham CAS# 101-21-3 Not established Clove Oil CAS# 8000-34-8 Not established
Engineering Controls:	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.



Personal Protective Equipment :



Clothing: Wear protective clothing and chemical resistant gloves when handling.

Eye Protection: Wear safety glasses. Eye fountain and washing facilities should be present at work area.

Respiratory Protection: Fogging applicators must wear a NIOSH-approved full-face respirator with organic vapour filter. For entry into enclosed areas treated with fog, handlers must wear a respirator with an organic-vapor removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE pre-filter. If the enclosed area contains less than 19.5% oxygen, the respirator must be a supplied-air respirator (MSHA/NIOSH approval number prefix TC-21C) or a self-contained breathing apparatus (SCBA, MSHA/NIOSH approval number prefix TX-13F).

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Liquid		
Appearance:	Light yellow liquid	Upper/Lower flammability limits:	Not available
Odor:	Clove	Vapor pressure:	Not available
Odor threshold:	Not available	Vapor density: (air =1)	Not available
pH:	5.0 – 7.0	Specific Gravity: (H₂O = 1)	1.09
Melting/Freezing point:	Not available	Solubility:	Insoluble
Boiling point:	No data available	Partition coefficient (n-octanol-water):	Not available
Flash point:	275 - 279°F (135-137°C)	Auto-ignition temperature:	Not available
Evaporation rate:	Not available	Decomposition temperature:	Not available
Flammability (solid, gas):	Not applicable	Viscosity:	58.6 mm ² /sec

10. STABILITY & REACTIVITY

Reactivity hazards:	None known
Chemical stability:	Stable at ambient conditions
Conditions to avoid:	None known
Incompatible materials:	Strong bases and oxidizers.
Hazardous decomposition products:	Acrid smoke and fumes may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Acute Oral:	LD ₅₀ (estimate): > 1570 mg/kg	Based on Ingredients
	Acute Dermal:	LD ₅₀ (estimate): ≥ 5000 mg/kg	Based on Ingredients
	Inhalation:	LC ₅₀ (estimate): > 20 mg/L	Based on Ingredients
Skin corrosion/irritation:	Causes skin irritation		
Eye damage/irritation:	Causes eye irritation		
Respiratory/Skin sensitization:	May cause respiratory irritation and allergic skin reaction.		
Germ cell mutagenicity:	Not available		
Carcinogenicity:	No carcinogenic effects are expected due to product being comprised of FDA-approved food-grade ingredients.		
Reproductive toxicity:	Chlorpropham is suspected of damaging unborn child in stunted growth.		
Target organ effects:	With repeated or prolonged exposure Clove oil is known to be toxic to nervous system and mucous membranes. Chlorpropham is known to cause liver and blood forming systems (bone marrow and spleen).		
Aspiration hazard:	Material does not present an aspiration hazard.		
Potential health effects:	May cause redness and reversible irritation to eyes. May cause skin irritation.		



12. ECOLOGICAL INFORMATION

Toxicity:	LC ₅₀ (96-hr) fish: > 18 mg/L (estimate)	Based on Ingredients
	Acute Toxicity:	Chlorpropham
	Northern bobwhite quail, LD ₅₀ : > 5620 mg/kg	
	Bluegill sunfish, LC ₅₀ (96h): 6.8 ppm	
	Rainbow trout, LC ₅₀ (96h): 5.7 ppm	
	Daphnia magna, EC ₅₀ (48h): 3.7 ppm	
Persistence/ degradability:	Not available	
Bioaccumulative potential:	Not available	
Mobility in soil:	Not available	
Other adverse effects:	Toxic to aquatic life with long lasting effects.	

13. DISPOSAL CONSIDERATIONS

Disposal methods:	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

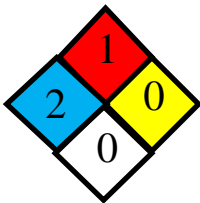
	<u>DOT</u>	<u>IMDG</u>	<u>IATA</u>
UN number:	Not applicable	Not applicable	Not applicable
Proper shipping name:	Not regulated	Not regulated	Not regulated
Hazard class(es):	Not applicable	Not applicable	Not applicable
Packing group:	Not applicable	Not applicable	Not applicable
Marine Pollutant:	Not applicable		
Special precautions:	None		

15. REGULATORY INFORMATION

FIFRA:	This product is registered with the U.S. EPA under registration number 64864-62.
SARA 313:	Contains no chemicals subject to SARA Title III Section 313 in quantities sufficient to trigger reporting requirements.
TSCA:	All components of this product are included or exempt from inclusion in EPA's Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
WHMIS:	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

HMIS Ratings:	Health – 2	Flammability – 1	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, to the extent consistent with applicable law, 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, to the extent consistent with applicable law, 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. Except to the extent a particular use and particular information are expressly stated on the product label, 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) 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.

SDS preparation date: May 26, 2015
Changes since last revision: New format to SDS

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