

Optimally Balanced Corp
TOADAL Repellant
Product Number: tr21c-11817
Version No: 1.02.1
L.GHS.USA.EN



SAFETY DATA SHEET

Conforms to Hazard Communication Standard 29 CFR 1910.1200

Section 1: Identification

Product Identifier	TOADAL Repellant
Product Code	tr21c-11817
Formula Number	tr21c-11817
EPA Registration Number	EXEMPT
Recommended Use	Use only in accordance with label directions.
Recommended Restrictions	Use only in accordance with label directions.
Manufacturer/Importer/Supplier/Distributor information	
Company name	Optimally Balanced Corp
Address	6615 West Boynton Beach Blvd
	Suite 176
	Boynton Beach, FL 33437
Telephone	561.440.2590
Emergency phone number	561.440.2590 **
For information about this SDS	561.440.2590

**** In a medical emergency call 911 or a Poison Control Center at 1-800-222-1222. Have the product container, label or this SDS with you when calling or going for treatment.**

Section 2: Hazard(s) Identification

GHS classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

OSHA/HCS status	This mixture is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Hazard Classification of the substance or mixture		
Health Hazards	Corrosion/Irritation (Skin)	Category 2
	Serious Eye Damage/Eye Irritation	Category 2
	Sensitization (Skin)	Category 1
	Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation)	Category 3
	Hazardous to the Aquatic Environment Acute	Category 3
	Hazardous to the Aquatic Environment Long-Term	Category 3



NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

GHS label elements

Hazard Pictogram(s):	
GHS Signal word:	WARNING

Hazard statements

H315	Causes skin irritation
H319	Causes serious eye irritation
H317	May cause an allergic skin reaction
H335	May cause respiratory irritation
H412	Harmful to aquatic life with long lasting effects

Precautionary statements - Prevention

P261	Avoid breathing mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response

P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P321	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. Specific treatment (see supplemental first aid instructions on this label).
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P363+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statements - Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary statements - Disposal

P501	Dispose of contents/container to an approved waste disposal plant or in accordance with state and local regulation.
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Hazard(s) not otherwise classified (HNOC):	No additional information available
Supplemental information:	none
Ingredient(s) of unknown acute toxicity:	none

Section 3: Composition/ Information on Ingredients

Chemical Name	Synonyms	CAS Number	% (weight)
Castor oil	Ricinus oil; Ricinus communis oil	8001-79-4	10.190%
Cinnamon oil	Oils, essential, cinnamon; Essential oils, Cinnamomum zeylanicum	8015-91-6	0.580%
Cottonseed oil	Cottonseed oil	8001-29-4	2.360%
Eugenol	Eugenol [USP]; 4-Allyl-2-methoxyphenol	97-53-0	1.600%
Lemongrass oil	Lemongrass oil (Cymbopogon citratus DC., Cymbopogon flexuosus)	8007-02-1	0.530%
Peppermint oil	Mentha piperita oil; Peppermint oil (Mentha piperita)	8006-90-4	0.310%
Rosemary oil	Rosemary oil (Rosmarinus officinalis L.)	8000-25-7	0.330%
Thyme oil	Thyme oil (Thymus vulgaris or zygis L.)	8007-46-3	3.010%
beta-Cyclodextrin	beta-Cyclodextrin	7585-39-9	***
Isopropyl alcohol	2-Propanol	67-63-0	< 7%
Lecithins	Lecithin	8002-43-5	***
Urea	Urea	57-13-6	***
Water	Distilled Water	7732-18-5	***

In accordance with paragraph (d) of 1910.1200, the exact percentage (concentration) of some ingredients has been withheld as a trade secret. Any Concentration shown as a range is due to batch variation. Other components are below reportable levels.

Section 4: First-Aid Measures

General advice	Get medical advice/attention if you feel unwell. Immediately move out of dangerous area if respiratory irritation develops. For medical emergencies call your poison control center at 1-800-222-1222. Have the product container or label with you when calling a poison control center, doctor, or going for treatment.
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Description of first-aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses (Removal of contact lenses after an eye injury should only be undertaken by skilled personnel). Continue to rinse eye(s) for at least 15 minutes. Get medical attention. Contact a medical facility, or doctor for treatment advice. If you need to travel to a medical facility or doctor continue rinsing eyes during transport. In all cases of doubt, or if pain persists or recurs seek medical attention.
Inhalation	If breathing is difficult, remove to fresh air, and keep at rest in a position comfortable for breathing. Other measures are usually unnecessary. In all cases of doubt, or if adverse health effects persist, breathing is irregular, allergic reaction is suspected or you feel unwell, call a poison control center, medical facility, or doctor for treatment advice.
Skin contact	Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Wash skin with plenty of soap and water after removing/handling contaminated clothing or other items. In all cases of doubt or if skin irritation, rash or redness develops, allergic reaction is suspected or you feel unwell, call a poison control center or doctor for treatment advice.
Ingestion	Immediately wash out mouth with water, give a glass of water. First aid is not generally required. In all cases of doubt, when allergic reaction is suspected or if large or unknown quantities are ingested call a poison control center, medical facility, or doctor for treatment advice. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
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Indication of any immediate medical attention or special treatment needed, if necessary

Notes to physician:	Treat symptomatically.
Specific treatments:	No specific treatment.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training.

Section 5: Fire-Fighting Measures

Extinguishing media	
Suitable extinguishing media	The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas. Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider: foam, dry chemical powder, carbon dioxide.
Unsuitable extinguishing media	None known.

Specific hazards arising from the chemical	
Specific hazards during firefighting	<p>Combustible.</p> <ul style="list-style-type: none">• Slight fire hazard when exposed to heat or flame.• Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO).• May emit acrid smoke.• Mists containing combustible materials may be explosive.• Alert the Fire Brigade and tell them the location and nature of the hazard.• Wear full body protective clothing with breathing apparatus.• Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools.• DO NOT approach containers suspected to be hot.• Cool fire exposed containers with water spray from a protected location.• If safe to do so, remove containers from path of fire
Hazardous combustion products	<p>carbon dioxide (CO₂), acrolein, nitrogen oxides (NO_x) or other pyrolysis products typical of burning organic material.</p> <p>CARE: Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.</p>
Further information	<p>Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.</p>

Special protective equipment and precautions for fire-fighters	
Special protective equipment for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Section 6: Accidental Release Measures

Minor Spills	<ul style="list-style-type: none"> • Clean up all spills immediately. • Avoid breathing vapors and contact with skin and eyes. • Control personal contact with the substance, by using protective equipment. • Contain and absorb spill with sand, earth, inert material, or vermiculite. • Wipe up. • Place in a suitable, labelled container for waste disposal
Major Spills	<p>Moderate hazard.</p> <ul style="list-style-type: none"> • Clear area of personnel and move upwind. • Alert Fire Brigade and tell them the location and nature of hazard. • Wear breathing apparatus plus protective gloves. • Prevent, by any means available, spillage from entering drains or water courses. • No smoking, naked lights or ignition sources. • Increase ventilation. • Stop leak if safe to do so. • Contain spill with sand, earth or vermiculite. • Collect recoverable product into labelled containers for recycling. • Absorb remaining product with sand, earth or vermiculite. • Collect solid residues and seal in labelled drums for disposal. • Wash area and prevent runoff into drains. <p>If contamination of drains or waterways occurs, advise emergency services.</p>
Personal precautions, protective equipment and emergency procedures	<p>Use personal protective equipment. Avoid breathing vapors or mist. Ensure adequate ventilation.</p> <p>For personal protection see section 8.</p>
Environmental precautions	<p>Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.</p>
Disposal	<p>For disposal see section 13.</p>

Section 7: Handling and Storage

KEEP OUT OF REACH OF CHILDREN

Precautions for safe handling	<p>Avoid all personal contact, including inhalation.</p> <p>Wear protective clothing when risk of exposure occurs.</p> <p>Use in a well-ventilated area.</p> <p>Prevent concentration in hollows and sumps.</p> <p>DO NOT enter confined spaces until atmosphere has been checked.</p> <p>DO NOT allow material to contact humans, exposed food or food utensils.</p> <p>Avoid contact with incompatible materials.</p> <p>When handling, DO NOT eat, drink or smoke.</p> <p>Keep containers securely sealed when not in use.</p> <p>Avoid physical damage to containers.</p> <p>Always wash hands with soap and water after handling.</p> <p>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</p> <p>Use good occupational work practice.</p> <p>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</p> <p>For precautions see section 2.2.</p>
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Advice on safe handling	Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation of vapor or mist. Wear personal protective equipment/face or eye protection when risk of exposure occurs. Keep away from open flames. To prevent contamination from animals and to prevent harm to pets; do not apply product directly to pet(s) or spray in or around pet's face. In the event of accidental contact with pet(s); thoroughly wash pet with soap and water for 15 minutes using personal protective equipment including gloves and face or eye protection. Do not directly touch animals that have been treated with product. Remove any treated animals from areas accessible to children or pets and dispose of in accordance with state and local regulations.
General hygiene	The normal safety precautions for handling chemicals should always be observed. Do not eat, drink, or smoke while using product. Do not touch face, eyes or mouth while using product. Immediately change contaminated clothing. Wash hands after working with substance
Conditions for safe storage, including any incompatibilities	Store in original container, with original label affixed. Keep container tightly closed and sealed and kept upright until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. container protected from direct sunlight in a dry, cool, and well-ventilated area, away from open flames and incompatible materials (see Section 10). Do not store with food and drink. Do not store in areas that are accessible to children or pets or where food or drinks are stored. Separate from oxidizing materials. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Always store chemicals in accordance with local, state, and federal regulations.
Specific end use(s)	No additional data available.

Section 8: Exposure Controls/Personal Protection

Components with workplace control parameters - occupational exposure limits



Ingredient	CAS	ACGIH	NIOSH	OSHA-Final PELs
isopropyl alcohol	67-63-0	200 ppm TWA; 400 ppm STEL	400 ppm TWA; 980 mg/m ³ TWA 2000 ppm IDLH	400 ppm TWA; 980 mg/m ³ TWA

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
isopropyl alcohol	400 ppm	2,000* ppm	12,000* ppm
urea	30 mg/m ³	280 mg/m ³	1,7000 mg/m ³

Workplace controls

Appropriate engineering controls	Provide adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of local, state, and federal environmental protection legislation. Keep away from drains, surface, and ground water. See Section 6 for disposal and release remediation.

Individual protection measures	
Personal protective equipment	 
Eye/face protection	Use tight sealing safety goggle with side protection. Wear face protection. Only use appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.
Respiratory Protection	Ensure area is well ventilated. Avoid vapor inhalation. Additional respiratory protection is necessary in poorly ventilated areas, when working with product in a vapor/gaseous state or in areas where continuous misting of product is expected or possible. Where risk assessment shows air-purifying respirators are appropriate, follow OSHA respirator regulations 29 CFR 1910.134 and use NIOSH/MSHA approved respirators. Confirmed asthmatics should avoid prolonged inhalation/contact or use additional respiratory protection.
Hand protection	Compatible chemical-resistant gloves Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. Appropriate hand protection as described by OSHA's hand protection regulations in 29 CFR 1910.138 should be worn before handling this product.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure. Choose body protection according to the amount and concentration of the dangerous substance at the workplace. All personal protective equipment and guidelines as prescribed by OSHA in 29 CFR 1910.132 should be met before handling this product.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should follow guidelines described by OSHA in 29 CFR 1910.136 before handling this product.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Personal protective equipment should be selected as prescribed by OSHA in 29 CFR 1910.132-140 and should comply with all local, state, and federal regulations before handling this product.

Section 9: Physical and Chemical Properties

Physical state	Liquid
Color	Light yellow
Odor	Aromatic, characteristic clove and thyme scents
Odor threshold	No data available
pH	9.0
Melting point	28-38°F
Boiling point	155-165°F
Flash point	205-215°F
Evaporation rate	No data available
Lower explosive (flammable) limits	No data available
Upper explosive (flammable) limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	0.96 – 0.98
Solubility	Soluble in water, alcohols, and fats
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not Applicable

Thermal decomposition	190-210°F
Viscosity	780 cSt

Section 10: Stability and Reactivity

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal storage conditions.
Possibility of hazardous reactions	No dangerous reactions known under normal conditions of use.
Conditions to avoid	Avoid open flame or exposure to fire. Avoid contact with incompatible materials. Strong acids. Strong bases. Strong oxidizing agents.
Incompatible materials	Strong oxidizing agents, alkalis, and strong acids.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition can lead to release of irritating gases and vapors which may include but are not limited to oxides of carbon and nitrogen.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11: Toxicological Information

Likely routes of exposure	eye contact, dermal/skin, ingestion, inhalation
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Symptoms of exposure

Eyes	<ul style="list-style-type: none"> Causes serious eye irritation, ardency, and redness. Repeated or prolonged eye contact may cause inflammation characterized by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. Splashes may cause severe eye irritation, possible corneal burns and eye damage. Eye contact may cause tearing or blurring of vision. Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present after instillation into the eye(s) of experimental animals.
Skin	<p>This material is not thought to produce significant adverse health effects or lasting skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.</p> <ul style="list-style-type: none"> May cause allergic skin reaction. May cause skin irritation. Symptoms may include rash, redness, drying, defatting and cracking of the skin. Skin dryness and irritation may appear. Prolonged skin contact may cause stinging sensation and mild irritation and may result in dermatitis Open cuts abraded or irritated skin should not be exposed to this material. Entry into the bloodstream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.
Ingestion	<p>In an occupational setting ingestion of insignificant quantities is not thought to be cause for concern (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <ul style="list-style-type: none"> May be harmful if swallowed. May cause nausea, vomiting, abdominal pain, diarrhea, headache, confusion, electrolyte depletion. and/or drowsiness.

	<ul style="list-style-type: none"> NOTE: Massive (intentional) consumption may result in over-exposure to higher aliphatic alcohols. Symptoms include headache, muscle weakness, giddiness, ataxia, (loss of muscle coordination), confusion, delirium and coma.
Inhalation	<p>The material is not thought to produce adverse health effects under normal conditions (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <ul style="list-style-type: none"> May cause respiratory tract irritation individuals with sensitized respiratory conditions. May cause an allergic reaction if the individual is allergic to any of the ingredients. Prolonged and/or significant inhalation may cause respiratory tract irritation and/or irritation of throat and mucous membranes. Symptoms may include coughing and/or dyspnoea (shortness of breath), headache, nausea and/or possible drowsiness.

Effects of Chronic Exposure	Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless, exposure by all routes should be minimized as a matter of course.
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Acute Toxicity

Calculated overall Chemical Acute Toxicity Values (ATE)		
LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
>2000 mg/kg	>2000 mg/kg	>5mg/l
Skin Corrosion/irritation	Irritant to skin and mucous membranes. Causes skin irritation – Category 2	
Serious Eye damage/irritation	Causes serious eye irritation – Category 2A	
Sensitization	May cause an allergic reaction. Skin Sensitizer - Category 1A.	
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	There are no ingredients present in this product above 0.1% that are listed as potential carcinogens on the NTP, IARC or OSHA lists.	
Reproductive Toxicity	Based on available data, the classification criteria are not met.	
STOT – single exposure	May cause respiratory irritation – Category 3	
STOT –repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Based on available data, the classification criteria are not met.	

NOTE: information was generated using the GHS classification criteria for mixtures.

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✓	Reproductivity	✗
Serious EyeDamage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitization	✓	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification

✓ – Data available to make classification

Section 12: Ecological Information (Non-mandatory)

Ecotoxicity	No additional data available.
Persistence and degradability	No additional data available.
Bio-accumulative potential	No additional data available.
Mobility in soil	No additional data available.
Other adverse effects	May cause adverse effects in aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not allow the material to enter streams, sewers or other waterways.

Ecotoxicity - Components

	Endpoint	Test Duration (hr)	Species	Value	Source
Castor oil	EC50	72	Algae or other aquatic plants	>100 mg/l	2
	EC50	48	Crustacea	100 mg/l	2
	NOEC(ECx)	24	Crustacea	100 mg/l	2
Thyme oil	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	16.1 mg/l	4
eugenol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72	Algae or other aquatic plants	23 mg/l	2
	EC50	48	Crustacea	1.05 mg/l	2
	NOEC(ECx)	48	Crustacea	0.36 mg/l	2
	LC50	96	Fish	13 mg/l	2
Rosemary oil	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72	Algae or other aquatic plants	0.45 mg/l	2
	EC50	48	Crustacea	0.307 mg/l	2
	EC50	96	Algae or other aquatic plants	>74 mg/l	2
	EC50(ECx)	96	Fish	0.179 mg/l	2
	LC50	96	Fish	0.28 mg/l	2
Peppermint oil	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48	Crustacea	2.7 mg/l	2
	EC50	96	Algae or other aquatic plants	2.61 mg/l	2
	EC50(ECx)	96	Algae or other aquatic plants	2.61 mg/l	2
	LC50	96	Fish	3.4 mg/l	2
	EC50	48	Crustacea	2.43 mg/l	2
	EC50	96	Algae or other aquatic plants	2.36 mg/l	2
	EC50(ECx)	48	Crustacea	2.43 mg/l	2
cyclodextrin	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48	Algae or other aquatic plants	>100 mg/l	8

	LC50	96	Fish	>100 mg/l	8
	EC50(Ex)	48	Crustacea	>100 mg/l	8
urea	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72	Algae or other aquatic plants	24541.9 mg/l	2
	EC50	48	Crustacea	3910 mg/l	4
	LC50	96	Fish	4.65-8.48 mg/l	4
	ErC50	72	Algae or other aquatic plants	24541.9 mg/l	2
	NOEC(ECx)	5040	Fish	>= 1.71 mg/l	2
isopropanol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72	Algae or other aquatic plants	> 1000 mg/l	1
	EC50	48	Crustacea	7550 mg/l	4
	EC50	96	Algae or other aquatic plants	> 1000 mg/l	1
	LC50	96	Fish	> 1400 mg/l	4
	EC50(ECx)	24	Algae or other aquatic plants	0.011 mg/l	4
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

Persistence and Degradability - Components

Ingredient	Persistence: Water/Soil	Persistence: Air
eugenol	HIGH	HIGH
urea	LOW	LOW
isopropanol	LOW (half-life = 14 days)	LOW (half-life = 3 days)

Bioaccumulative Potential - Components

Ingredient	Bioaccumulation
eugenol	LOW (LogKOW = 2.27)
cyclodextrin	LOW (LogKOW = -7.7726)
isopropanol	LOW (BCF = 10)
urea	LOW (LogKOW = 0.05)

Mobility in Soil - Components

Ingredient	Bioaccumulation
eugenol	LOW (KOW = 1124)
cyclodextrin	LOW (KOW = 275400)
isopropanol	HIGH (KOC = 1.06)
urea	LOW (KOW = 4.191)

Section 13: Disposal Considerations (Non-mandatory)

- Dispose of contents/container in accordance with all local, state, and federal regulations.
- Call your solid waste agency for disposal instructions
- Do not allow uncontrolled discharge of product into the environment.
- Do not contaminate water when disposing of equipment wash water or rinsate.

Product / Packaging disposal	<ul style="list-style-type: none">• Containers may still present a chemical hazard/ danger when empty.• Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none">• If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to• store the same product, then puncture containers, to prevent re-use, and bury at an authorized landfill.• Where possible retain label warnings and SDS and observe all notices pertaining to the product. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none">• Reduction• Reuse• Recycling• Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none">• DO NOT allow wash water from cleaning or process equipment to enter drains.• It may be necessary to collect all wash water for treatment before disposal.• In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.• Dispose of contents/container in accordance with all local, state, and federal regulations.• Call your solid waste agency for disposal instructions• Do not allow uncontrolled discharge of product into the environment.• Do not contaminate water when disposing of equipment wash water or rinsate.
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Section 14: Transport Information (Non-mandatory)

NOTE:	INDIVIDUAL UNITS IN PACKAGING OF ≤ 5 LITERS ARE NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS AS DEFINED BY U.S. DEPARTMENT OF TRANSPORTATION 49CFR 100-185.
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Transportation Regulation

For transport of individually packaged units with a volume of 5 liters or less

The Transportation of Dangerous Good Act classification for this product:	NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
Labels	NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS
Marine Pollutant	NO
Land transport (DOT):	NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS
Air transport (ICAO-IATA / DGR):	NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS
Sea transport (IMDG-Code / GGVSee):	NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS
Transport in bulk according to Annex II of MARPOL and the IBC code	NOT APPLICABLE

Transportation Regulation

For transport of one or more individually packaged unit(s) with an individual volume exceeding 5 liters

The Transportation of Dangerous Good Act classification for this product:	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
Labels:	
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
UN Number	UN3082
Marine Pollutant	NO. NOT DEFINED AS MARINE POLLUTANT PER 49 CFR 172.322
Special Provisions	8, 146, 173, A97, A158, A197, 274, 969
Land transport (DOT)	
UN/ID	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packaging Group	III
Special Provisions	8, 146, 173
Air transport (ICAO-IATA / DGR)	
UN/ID	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packaging Group	III
Special Provisions:	A97, A158, A197

Sea transport (IMDG-Code / GGVSee)	
UN/ID	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	9
Packaging Group	III
Special Provisions:	274, 969

Shipping container and transport vehicle placarding and labeling may vary from the below information. Products that are regulated for transport will be packaged and marked as Dangerous Goods in Limited Quantities according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations. NOTE: INDIVIDUAL UNITS IN PACKAGING OF ≤ 5 LITERS ARE NOT SUBJECT TO DOT REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS AS DEFINED BY U.S. DEPARTMENT OF TRANSPORTATION 49CFR 100-185.

Section 15: Regulatory Information (Non-mandatory)

State Regulations

US. California Proposition 65
None Reported

Federal Regulations

EPA registration number	This product qualifies for exemption from EPA registration under Federal Insecticide, Fungicide and Rodenticide Act FIFRA 25(b).
Federal Insecticide, Fungicide, Rodenticide Act Regulations	
This chemical is a pesticide product regulated by the Environmental Protection Agency and is subjected to certain labeling requirements under the 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 as required on the pesticide label provided below.	

US EPA Label Information

KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Harmful if inhaled. Avoid breathing vapor or spray mist. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID STATEMENTS

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. Call a poison control center or doctor for treatment advice. **If on skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **If inhaled:** Move person 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 poison control center or doctor for further treatment advice. **If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person. For medical emergencies call your poison control center at 1-800-222-1222. Have the product container or label with you when calling a poison control center, doctor, or going for treatment.

ENVIRONMENTAL HAZARDS

This product is not intended to be used in lakes, canals, or other bodies of water. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash water or rinsate. This product does not contain any ingredients that are known to be toxic to bees, however, micro-encapsulated insecticides which are used on crops are potentially harmful to other pollinators.

PHYSICAL HAZARDS

Combustible. Do not use or store near heat or open flame

STORAGE AND DISPOSAL

Storage: Reclose container tightly after each use by turning sprayer nozzle clockwise until it stops. Store in a cool, dry area inaccessible to children and pets. **Disposal and Container Handling:** Nonrefillable container. Do not reuse or refill this container. **If empty:** recycle if available otherwise place in trash. **If partly filled:** Call your solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

Safety, Health, and Environmental Regulations / Legislation

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)		
CAS No	%[weight]	Name
67-63-0	< 5.0	isopropanol
<i>This information must be included in all SDSs that are copied and distributed for this material.</i>		

EPA TSCA Inventory

All of the components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Lists the individual substances or mixtures that comprise this product appear or are listed:

cinnamon oil is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

cottonseed oil is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

eugenol is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

lemongrass oil is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

peppermint oil is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

rosemary oil is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

thyme oil is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

isopropanol is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
US - Massachusetts - Right To Know Listed Chemicals
US ACGIH Threshold Limit Values (TLV)
US ACGIH Threshold Limit Values (TLV) - Carcinogens
US DOE Temporary Emergency Exposure Limits (TEELs)
US EPCRA Section 313 Chemical List
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US TSCA Section 4/12 (b) - Sunset Dates/Status

urea is found on the following regulatory lists	
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	
US TSCA Chemical Substance Inventory - Interim List of Active Substances	
US Toxicology Excellence for Risk Assessment (TERA) Workplace	
Environmental Exposure Levels (WEEL)	
US AIHA Workplace Environmental Exposure Levels (WEELs)	
US DOE Temporary Emergency Exposure Limits (TEELs)	
US EPA Integrated Risk Information System (IRIS)	

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories	
Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

Section 16: Other Information

Revision date	02/22/2024
Initial date	10/10/2021

Disclaimer	Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.
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