



TRICHONATIVA® HORTALIZAS (SC)

SAFETY DATA SHEET According to NCh. 2245:2021

Release Date: 30/05/2022.

Version: 04.

SECTION 1: Identification of the substance or mixture and the company or company.

Product Trade Name:	TRICHONATIVA® VEGETABLES (SC).
Name of the active substance:	<i>Trichoderma harzianum strain Queule</i>, <i>Trichoderma virens strain Sherwood</i>, <i>Trichoderma parceramosum strain Trailles</i>.
Recommended Uses:	Biological Fungicide.
Provider Name:	Bio Isumos Nativa SpA.
Supplier Address:	Parcela Antihue Lote 4 B2, Maule, Talca, Chile. Phone: +56-71-2970696. ventas@bionativa.cl www.bionativa.cl
Provider's Phone Number:	PHONE: +56-71-2970696.
Emergency phone number in Chile:	CITUC TOXICOLOGICAL EMERGENCIES. PHONE: +56-2-26353800.

SECTION 2: Identification of the hazard(s).

Classification according to GHS/GHS:

Route of exposure	Hazard Category	Hazard Indication:	A Word of Warning
Oral:	Unrated.	-	-
Dermal:	Category 5.	H313: May be harmful in case of skin contact.	Attention.
Inhalation:	Category 4.	H332: Harmful if inhaled.	Attention.
Dermal irritation:	Category 3.	H316: Causes mild skin irritation.	Attention.
Eye irritation:	Classification 2B.	H320: Causes eye irritation.	Attention.
Sensitization:	Category 1B	H317: May cause an allergic skin reaction.	Attention.
Aquatic Acute Fish and Aquatic Invertebrates:	The product is not expected to be toxic or pathogenic or infectious to aquatic organisms.		

GHS Label:

Symbol:	Precautionary tips:
Inhalation Sensitization: 	Prevention: Inhalation P261: Avoid breathing dust. P271: Use only outdoors or in a well-ventilated place. Sensitization: P261: Avoid breathing dust. P272: Contaminated work clothes should not be allowed to leave the workplace. P280: Wear protective gloves. Intervention: Inhalation: P304 + P340. IN CASE OF INHALATION: Transport the person outdoors and keep him or her in a position that makes it easier for him or her to breathe. P312: Call a poison control center/doctor if the person is unwell. Sensitization: P302 + P352: If IT COMES INTO CONTACT WITH SKIN: Wash with plenty of water. P333 + P313: If skin irritation or rash occurs: seek medical attention. P321: Specific treatment (see label and safety data sheet). P362 + P364: Remove contaminated clothing and wash it before wearing it again. Disposal: Sensitization: P501: Remove contents/container in accordance with local/regional/national/international regulations.
Dermal, Eye Irritation, Dermal Irritation: No symbol.	Prevention: Eye irritation: P264: Wash thoroughly after handling. Intervention: Dermal: P302 + P312: IN CASE OF SKIN CONTACT: Call a POISON CENTER/MEDICAL/ if you are unwell. Dermal irritation: P332 + P313: If skin irritation occurs: Get medical advice/attention. Eye irritation: P305 + P351 + P338: IN CASE OF CONTACT WITH EYES: Rinse with water carefully for several minutes. Remove contact lenses when they are present and can be done easily. Continue washing. P337 + P313: If eye irritation persists: Consult a doctor.

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Specific Classification: Chile Resolution SAG 2.196/2000: Specific badge: Other hazards:	IV Products that do not normally offer Danger. Agricultural and Livestock Service Authorization No. 2.859-O. Green Band-Care. It is non-flammable, non-combustible, non-explosive and non-reactive.
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SECTION 3: Composition/information of the components.

In the case of a mixture: It does not contain components that are classified as hazardous. *Trichoderma harzianum* strain Queule, *Trichoderma virens* strain Sherwood, *Trichoderma parceramosum* strain Trailles do not have taxonomic proximity to pathogenic organisms.

	Component 1	Component 2	Component 3
GHS Classification:	Oral: Unclassified. Dermal: Category 5.H313: May be harmful in case of contact with the skin. Inhalation: Category 4.H332: Harmful if inhaled. Dermal irritation: Category 3. H316: Causes mild skin irritation. Eye Irritation: Classification 2B. H320: Causes eye irritation. Sensitization: Category 1B H317: May cause an allergic skin reaction. ATTENTION. 	Oral: Unclassified. Dermal: Category 5. H313: May be harmful in case of skin contact. Inhalation: Category 4. H332: Harmful if inhaled. Dermal irritation: Category 3. H316: Causes mild skin irritation. Eye Irritation: Classification 2B. H320: Causes eye irritation. Sensitization: Category 1B H317: May cause an allergic skin reaction. ATTENTION. 	Oral: Unclassified. Dermal: Category 5. H313: May be harmful in case of skin contact. Inhalation: Category 4. H332: Harmful if inhaled. Dermal irritation: Category 3. H316: Causes mild skin irritation. Eye irritation: Classification 2B. H320: Causes eye irritation. Sensitization: Category 1B H317: May cause an allergic skin reaction. ATTENTION. 
Systematic chemical designation:	EC No.: Not determined.	EC No.: 614-158-9*	EC No.: Not determined.
Common or generic name:	<i>Trichoderma harzianum</i> Queule strain	<i>Trichoderma virens</i> Sherwood Strain	<i>Trichoderma parceramosum</i> strain Trailles
Concentration Range:	1.217% w/v (12.17% g/l ≈ 12.17 g/kg)	1.217% w/v (12.17% g/l ≈ 12.17 g/kg)	1.217% w/v (12.17% g/l ≈ 12.17 g/kg)
CAS Number:	Not determined.	67892-34-6*	Not determined

* *Trichoderma virens*.

SECTION 4: First Aid Measures.

IN CASE OF POISONING, TAKE THE PATIENT TO THE DOCTOR AND GIVE HIM THE LABEL.

Inhalation:	Move the patient to fresh air. If the person is not breathing, give artificial respiration. Take to a care facility immediately.
Skin contact:	Remove clothing and shoes. Wash with plenty of water cleanses the skin and thoroughly between hair, nails and skin folds. Wash clothes before using again.
Eye Contact:	Wash with water for 15 minutes, keeping the eyelids well separated and lifted. If you wear contact lenses, remove them after the first 5 minutes and then continue rinsing. In addition, the lenses should not be used again.
Ingestion:	DO NOT INDUCE VOMITING. Never give something by mouth to an unconscious person. In case of general discomfort, put the affected person on their side. Take them to the care center immediately.



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<p>Main symptoms and effects, acute and delayed:</p>	<p>It has no acute effects. In case of susceptible people: Diarrhea, cough, shortness of breath, itchy nose, irritation, and rarely causes gastroenteritis. No delayed effects are expected.</p> <p>Most important symptoms/effects: In immunocompromised patients or recent trauma. Prolonged and severe neutropenia, mucosal barrier damage, and transplantation.</p>
<p>Protecting First Responders:</p> <p style="padding-left: 100px;">No special protection is required.</p>	
<p>Notes for Attending Physician: Antidote: None. Medical Treatment: Treat symptomatically.</p>	

SECTION 5: Fire-fighting measure.	
Extinguishing Agents:	CO and CO ₂ , chemical powder or foam solution. Inappropriate Extinguishing Agents does not apply.
Specific hazards:	There are no known special hazards related to the combustion and thermal degradation of this product.
Recommendations for Counter Personnel Fire:	<p>Small Fire: Local control with trained personnel and extinguishing agents: Fire extinguisher.</p> <p>Large Fire: Public safety: Call the emergency response phone number (Fire Department) first. Initial evacuation. Keep unauthorized personnel away. Stay upwind, in high areas and/or upstream.</p> <p>Procedure for Fire Control by Authorized Personnel (Firefighters): Move containers from the fire area if you can do so safely. Make a containment dam for the water that controls the fire for later disposal; Don't spill the material on me.</p> <p>Fire Involving Tanks or Railcars or Trailers and Their Loads: If a tank, railroad car, or tank car is involved in a fire, AISLE is involved in a fire. Fight the fire from a maximum distance or use fixed hose holders or regulator sliders. Do not put water in the containers. Cool containers with jets of water until long after the fire has been extinguished. Remove immediately if an increasing sound comes out of the vent safety mechanisms, or if the tank begins to discolor. ALWAYS stay away from tanks engulfed in fire. For massive fires, use fixed hose holders or regulator chiflons; If this is impossible, retreat from the area and let it burn. Precautions for Emergency Personnel and/or Firefighters: Only the firefighters' structural protective suit is required to fight the fire. It offers no special hazards.</p>

SECTION 6: Measures to be taken in the event of an accidental spill/spill.



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Personal Precautions,
Protective Equipment, and
Emergency Procedure:

Personal precautions: Avoid inhalation, ingestion, and contact with skin and eyes. Ensure adequate ventilation, especially in confined areas.

Protective Equipment:

Small Spill:

Only basic equipment is required: rubber gloves, rubber boots, long-sleeved waterproof overalls, face mask and goggles.

Large Spill:

Only the firefighters' structural protective suit is required and only the basic equipment is required: rubber gloves, rubber boots, long-sleeved waterproof overalls, face mask, and goggles to catch the spill. It offers no special hazards.

Emergency Procedure:

Spills onto pavements/natural soil:

Small Spill:

- You should demarcate the area with absorbent cords, sand or sawdust to demarcate the area and avoid contact.
- Subsequently, the spill will be completely absorbed, with absorbent material and collected in a container specially designated for this purpose, duly identified and sent to a final disposal facility authorized by the competent authority.
- Only basic application equipment is required, rubber gloves, rubber boots, long-sleeved waterproof overalls, face mask and goggles.

Large Spill:

- Call the emergency response phone number first.
- Keep unauthorized personnel away.
- Stay with a tailwind.
- Demarcate the area with absorbent cords, sand or sawdust.
- Absorb the spill completely, with absorbent material, sand or sawdust.
- Do not allow the spill with the absorbent material to rise into the air, cover them with a plastic cover.
- Collect spilled material, transfer it to a properly identified container and send it to an approved final disposal facility for this type of waste.
- Personal Protective Equipment with respiratory protection is required.

Spills into the Water:

- Call the emergency response phone number first.
- Notify neighbors who may be affected immediately.
- Notify the country's Health Entity.
- Contain spill expansion with absorbent cords.
- Subsequently, the product must be absorbed using cloths, sleeves or other absorbent material until exhausting efforts.
- Spill control wastes will be placed in containers, properly identified and sent to an authorized final disposal facility for this type of waste.

Environmental Precautions:

It doesn't offer any special hazards, but:

- Prevent their introduction into waterways, sewers, basements or confined areas.
- Do not dump into surface water or sewer system.
- Prevent product penetration into drains.
- Must not be released into the environment.
- **PROTECT THE ENVIRONMENT WITH GOOD AGRICULTURAL PRACTICES.**



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	<p>•DO NOT CONTAMINATE RIVERS, LAKES, PONDS, AND GROUNDWATER SOURCES WITH THIS PRODUCT OR WITH EMPTY CONTAINERS OR PACKAGING.</p>
<p>Containment and Clean-Up Methods and Materials (Recovery, Neutralization and Final Disposal):</p>	<p>Collect the spilled material, transfer it to a properly identified container and send it to an authorized facility for this type of waste.</p> <p>-Recovery: Not applicable. -Neutralization: Not applicable. -Final disposal: Dispose of waste in accordance with local, provincial and national regulations.</p>
<p>Additional Disaster Prevention Measures:</p>	<p>Not applicable.</p>
<p>Other Relative Indications To spills:</p>	<p>No.</p>

SECTION 7: Handling and Storage.

Manipulation:

Precautions for safe handling:

Handling During Manufacturing/Formulation:

Avoid contact with eyes, skin, and clothing. Do not ingest. Do not inhale.

Manufacture/formulation of the product only by trained and authorized persons.

Do not eat, drink or smoke during the manufacture/formulation of the product.

During manufacturing/formulation, personal protective equipment is required: rubber gloves, rubber boots, long-sleeved waterproof overalls, face mask and goggles.

Immediately remove contaminated clothing and bathe at the end of Manufacturing/Formulation.

Use and Handling:

Avoid contact with eyes, skin, and clothing. Do not ingest. Do not inhale.

Handle outdoors or in a well-ventilated place.

Keep out of reach of children and inexperienced people.

Handling and application of the product only by trained and authorized persons.

DO NOT EAT, SMOKE, OR DRINK DURING HANDLING AND APPLICATION OF THIS PRODUCT.

SHOWER AFTER WORK AND PUT ON CLEAN CLOTHES.

During the handling and application of the product, use: rubber gloves, rubber boots, long-sleeved waterproof overalls, face mask and goggles.

Do not mix products during handling and application.

Immediately remove contaminated clothing and bathe at the end of handling and application.

Contact Prevention:

This Product can penetrate by the following routes: Oral, dermal, ocular and inhalation, therefore, avoid contact.



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<p>Storage: Conditions for safe storage:</p>	<p>DO NOT STORE THIS PRODUCT IN DWELLING HOUSES. KEEP LOCKED OUT OF THE REACH OF CHILDREN. STAY AWAY FROM CHILDREN, UNAUTHORIZED PERSONS, PETS, FOOD, AND MEDICINES.</p> <p>Keep separate from any type of food, fodder, seeds or any other that are intended for human or animal use or consumption. Storage temperature: should be stored at 4° C for a maximum of 30 days. Keep in its original container, with its respective label. Do not store near heat, open flame, direct sunlight, or hot surfaces. It is recommended not to mix with other pesticides. Use only packaging that ensures the integrity of the inner bags.</p>
<p>Technical measures:</p>	<p>The product should be stored in secure warehouses that have good ventilation, cement flooring, and spill containment systems. Do not store in places where corrosive or explosive products are found.</p>
<p>Incompatible substances and mixtures:</p>	<p>Incompatibility for gasket applications with cupric compounds and antibiotics. Do not mix TRICHONATIVA® VERDURAS (SC) with other pesticides without first performing a compatibility test. Check with the manufacturer's compatibility list.</p>

SECTION 8: Exposure Controls/Personal Protection.

<p>Control Parameters:</p> <ul style="list-style-type: none"> - Weighted allowable limit (LPP): - Absolute permissible limit (LPA): - Temporary permissible limit (LPT): - Tolerance limit biological: <p>Personal Protective Equipment:</p> <p>Respiratory Protection:</p> <p>Hand Protection:</p> <p>Eye Protection:</p> <p>Skin and body protection:</p> <p>Engineering Measurements:</p>	<p>It does not expect occupational exposure to this product to be a cause for concern because of the low toxicity profile and on the assumption that precautionary labeling instructions aim to minimize worker exposure.</p> <p>Not determined by DS. 594 Minsal Chile/OSHA.</p> <p>Not determined by DS. 594 Minsal Chile/OSHA.</p> <p>Not determined by DS. 594 Minsal Chile/OSHA.</p> <p>Not determined.</p> <p>Identification in blood and joint fluids.</p> <p>USE THE FOLLOWING PROTECTIVE EQUIPMENT WHEN HANDLING THE PRODUCT, DURING MIXING PREPARATION, LOADING AND APPLICATION:</p> <p>Mask.</p> <p>Rubber gloves.</p> <p>Spectacles.</p> <p>Rubber boots, long-sleeved waterproof overalls .</p> <p>Showers, eyewash stations, ventilation systems.</p>
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SECTION 9: Physical and Chemical Properties.

Physical Condition:	Liquid.
How it's presented:	Concentrated suspension.
Colour:	Emerald green.



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Smell:	Fermented fruits.
pH:	5.15+/-0.1 (1% w/v in water at 20°C).
Melting Point/Freezing Point:	Not applicable.
Starting Point and Boiling Interval:	Not determined.
Flash Point:	Non-flammable.
Upper/Lower Flammability or Explosiveness Limit:	It does not generate toxic combustion products, only CO and CO ₂ .
Vapor pressure (25°C):	Not relevant due to the nature of the active ingredient, not providing characteristic information of danger.
Vapor Density:	Not relevant due to the nature of the active ingredient, not providing characteristic information of danger.
Absolute density (20°C):	1.0008-1.0022 g/mL.
Solubilities:	Solubility in water: < 1 g/L Insoluble (25°C).
	Miscibility in water: Under test conditions of 30.0 ± 2°C, after 1 hour at rest, it was immiscible in standard water with a hardness of 20 mg/kg CaCO ₃ .
	Solubility/miscibility in organic solvents: Xylol: 2.2 g/l. Insoluble in: Organic solvents, ethyl acetate, heptane, dichloroethane, methanol, acetone.
Partition coefficient (n-octanol/water (Log Kow)):	Not relevant due to the nature of the active ingredient, not providing characteristic information of danger.
Auto-ignition temperature:	Not applicable.
Decomposition Temperature:	>40°C would affect the technical characteristics of the formulated product.
Evaporation Rate:	Not applicable.
Viscosity:	Not applicable.
Explosive properties:	Non-explosive.
Oxidizing properties:	Non-oxidizing or oxidizing.
Corrosivity:	Non-corrosive to: carbon steel, aluminum, copper, brass.

SECTION 10: Stability and Reactivity.

Reactivity:	Non-reactive.
Chemical Stability:	Stable at normal discharge temperature.
Dangerous reactions:	It doesn't happen.
Conditions to avoid:	
Incompatible Materials:	Humidity and high temperatures Incompatibility for gasket applications with cupric compounds and antibiotics. Do not mix TRICHONATIVA® VERDURAS (SC) with other pesticides without first performing a compatibility test. Check with the manufacturer's compatibility list.
Hazardous Decomposition Products:	It does not generate toxic combustion and decomposition products, only CO ₂ .

SECTION 11: Toxicological Information.

Acute Toxicity: No known reports of adverse effects on human health.

Acute Oral Toxicity:	LD ₅₀ : >5000 mg/kg. WHO classification: Category IV "Products that normally do not pose a hazard".
Acute dermal toxicity:	LD ₅₀ : > 2000 g/kg.
Acute Inhalation Toxicity:	LC ₅₀ : > 2 mg/L.
Skin Irritation/Corrosion:	Mild skin irritation.
Severe Eye Injuries/Eye Irritation:	Mild: Irritating to the eyes.
Respiratory or cutaneous sensitization:	Possible sensitizer.



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Subchronic and Chronic Toxicity: Subchronic and chronic toxicity is not required because no survival, replication, infectivity, toxicity, or persistence of microbial agents is observed in the test animals treated in the acute oral infectivity test.

Reproductive cell mutagenicity:

<i>Trichoderma harzianum</i> strain Queule:	Not applicable.
<i>Trichoderma virens</i> Sherwood strain:	None of the strains involved in the commercial formulation presents toxic effects in the acute toxicity tests, it was not necessary to perform mutagenicity tests, since the strains of the product TRICHONATIVA® VERDURAS (SC) separately or the mixture of these in the formulation do not generate toxic effects on human or animal health.
<i>Trichoderma parceramosum</i> strain Trailes:	

Carcinogenicity:

<i>Trichoderma harzianum</i> strain Queule:	Not applicable.
<i>Trichoderma virens</i> Sherwood strain:	None of the strains involved in the commercial formulation present toxic effects in the acute toxicity tests, it was not necessary to carry out Carcinogenicity tests, since the strains of the product TRICHONATIVA® VERDURAS (SC) separately or the mixture of these in the formulation do not generate toxic effects on human or animal health.
<i>Trichoderma parceramosum</i> strain Trailes:	

Reproductive Toxicity:

<i>Trichoderma harzianum</i> strain Queule:	Not applicable.
<i>Trichoderma virens</i> Sherwood strain:	None of the strains involved in the commercial formulation presents toxic effects in the acute toxicity tests, it was not necessary to perform reproduction tests since the strains of the product TRICHONATIVA® VERDURAS (SC) separately or the mixture of these in the formulation do not generate toxic effects on human or animal health.
<i>Trichoderma parceramosum</i> strain Trailes:	

Specific Organ Toxicity – Single Exposure:

There is no known damage caused to the organism (body and different organs) of humans and mammals:

<i>Trichoderma harzianum</i> strain Queule:	Based on the available data (based on the results of acute toxicity analyses, which classified the active ingredients (<i>Trichoderma harzianum</i> strain Queule, <i>Trichoderma virens</i> strain Sherwood, <i>Trichoderma parceramosum</i> strain Trailes) as non-toxic and no long-term, chronic, subchronic reproductive or other studies are required) the classification criteria are not met.
<i>Trichoderma virens</i> Sherwood strain:	
<i>Trichoderma parceramosum</i> strain Trailes:	

Specific toxicity to certain organs – repeated exposures:

There is no known damage caused to the organism (body and different organs) of humans and mammals:

<i>Trichoderma harzianum</i> strain Queule:	Based on the available data (based on the results of acute toxicity analyses, which classified the active ingredients (<i>Trichoderma harzianum</i> strain Queule, <i>Trichoderma virens</i> strain Sherwood, <i>Trichoderma parceramosum</i> strain Trailes) as non-toxic and no long-term, chronic, subchronic reproductive or other studies are required) the classification criteria are not met.
<i>Trichoderma virens</i> Sherwood strain:	
<i>Trichoderma parceramosum</i> strain Trailes:	

Aspiration hazard:

It is not dangerous by this route of exposure.

Possible routes of exposure:

Oral, dermal, ocular and inhalation, therefore avoid contact.



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<p>Symptoms related to physical, chemical and toxicological characteristics:</p> <p>Other pertinent information on adverse health effects:</p>	<p>Expected acute effects: No acute effects in tests. In susceptible people, they may have: Diarrhea, cough, shortness of breath, itchy nose, irritation, rarely causes gastroenteritis. Most important symptoms/effects: In immunocompromised patients or recent trauma. Prolonged and severe neutropenia, mucosal barrier damage, and transplantation.</p> <p>Toxicokinetics: Toxicological data demonstrated that <i>Trichoderma harzianum</i> strain Queule, <i>Trichoderma virens</i> strain Sherwood, <i>Trichoderma parceramosum</i> strain Trailes are not toxic, infectious, or pathogenic to mammals. No risks to acute, subchronic, chronic, immune, or endocrine exposures were identified. Nor is it predicted that dietary exposure through drinking water could cause harm to populations, because it is not known to grow or thrive in aquatic environments, nor is it expected to survive in drinking water treatment. These species are widely distributed in nature. Exposure and risk to workers is likely to be minimal or negligible.</p> <table border="1" style="width: 100%;"> <tr> <td>Absorption:</td> <td>There is no history of dermal and oral absorption.</td> </tr> <tr> <td>Metabolism:</td> <td>The metabolic pathways of these strains have not been characterized in detail. Metabolic models reflect the nutritional adaptation of these strains to various niches in nature. Toxicological data demonstrated that the strains are not toxic, infectious, or pathogenic to mammals.</td> </tr> <tr> <td>Distribution:</td> <td>There is no record.</td> </tr> <tr> <td>Excretion:</td> <td>There is no record.</td> </tr> </table> <p>Pathogenicity and acute infectivity (oral, dermal and inhalational): It is not pathogenic or infectious.</p> <p>Endocrine disruption: This product is unlikely to have estrogenic or endocrine effects because the strains are virtually non-toxic to mammals.</p> <p>Neurotoxicity: It is not a neurotoxic product.</p> <p>Immunotoxicity: Does not affect the immune system.</p>	Absorption:	There is no history of dermal and oral absorption.	Metabolism:	The metabolic pathways of these strains have not been characterized in detail. Metabolic models reflect the nutritional adaptation of these strains to various niches in nature. Toxicological data demonstrated that the strains are not toxic, infectious, or pathogenic to mammals.	Distribution:	There is no record.	Excretion:	There is no record.
Absorption:	There is no history of dermal and oral absorption.								
Metabolism:	The metabolic pathways of these strains have not been characterized in detail. Metabolic models reflect the nutritional adaptation of these strains to various niches in nature. Toxicological data demonstrated that the strains are not toxic, infectious, or pathogenic to mammals.								
Distribution:	There is no record.								
Excretion:	There is no record.								

SECTION 12: Ecological information

Ecotoxicity (EC, IC and LC): No known reports of adverse effects on the environment.

Aquatic organisms:

Fishes:	The product is not expected to be toxic or pathogenic or infectious to fish.
<i>Daphnia magna</i>:	The product is not expected to be toxic or pathogenic or infectious to freshwater invertebrates.
Algae:	No pathogenicity, phytotoxicity or any other adverse effects on plants have been indicated.

Terrestrial organisms:

Terrestrial plants:	It is not expected to be toxic, pathogenic, or infectious to land plants.
Poultry:	The product is not expected to be toxic or pathogenic or infectious to birds.
Bees:	The product is not expected to be toxic or pathogenic or infectious to bees.
Arthropods other than bees:	The product is not expected to be toxic or pathogenic or infectious.
Non-target earthworms or soil microorganisms:	No adverse effects.



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Persistence and degradability:	
Soil:	
<i>Trichoderma harzianum</i> strain Queule:	These species live in the top layer of soils, which are rich in organic matter. This is in line with the observation of greatly reduced survival rates with increasing soil depths, as population growth and germination would stop due to nutrient depletion, so there is no risk of uncontrolled growth.
<i>Trichoderma virens</i> Sherwood strain:	
<i>Trichoderma parceramosum</i> strain Trailes:	
Water:	
<i>Trichoderma harzianum</i> strain Queule:	It is unlikely that these species within the soil will leach into the water due to greatly reduced survival rates with increasing soil depths, as the growth and germination of the population would be halted due to nutrient depletion, so there is no risk of seepage into the water. Even if oral exposure occurred through drinking water, it is concluded that there is reasonable certainty that no harm will result from exposure to residues of these species in all anticipated exposures to drinking water due to the lack of acute oral toxicity/pathogenicity to mammals.
<i>Trichoderma virens</i> Sherwood strain:	
<i>Trichoderma parceramosum</i> strain Trailes:	
Air:	
<i>Trichoderma harzianum</i> strain Queule:	These species are not expected to be predominant in this environmental behavior, because: Product survival during aerosolization is often limited due to stresses such as shear forces, desiccation, temperature, and exposure to UV light. These species occur naturally in the air at low frequency and low concentration.
<i>Trichoderma virens</i> Sherwood strain:	
<i>Trichoderma parceramosum</i> strain Trailes:	
Bioaccumulative potential:	No cumulative effect is anticipated.
Mobility on the ground:	
<i>Trichoderma harzianum</i> strain Queule:	These species are considered to live in the top layer of soils, which are rich in organic matter. There is no risk of uncontrolled growth as the growth and germination of the population would stop due to nutrient depletion.
<i>Trichoderma virens</i> Sherwood strain:	
<i>Trichoderma parceramosum</i> strain Trailes:	
SECTION 13: Final Disposition Information.	
Residues/Remnants/Waste:	Controlled incineration in furnaces at high temperatures > 1000°C with combustion and destruction efficiency: 99.9% and/or arranged if the national or local legislation in force allows it. In case of spills or pesticide waste, collect them with sawdust or absorbent material, collect them in an airtight container, dispose of them in a sanitary landfill authorized by the regulatory entity.
Contaminated Packaging and Packaging:	" THE USE OF CONTAINERS OR PACKAGING IN A WAY THAT IS DIFFERENT FROM WHAT THEY WERE DESIGNED FOR ENDANGERS HUMAN HEALTH AND THE ENVIRONMENT. " Container: Dispose of the packaging in a clearly identified place, until the health authority specifies its final destination. Contaminated packaging: Dispose of the packaging/packaging in a clearly identified place, until the health authority specifies its final destination. Uncontaminated packaging may be recycled.



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Prohibition of discharge into wastewater:	The discharge of untreated wastewater into bodies of RIVERS, LAKES, PONDS AND UNDERGROUND AND SURFACE WATER sources is prohibited.
Other Special Precautions	Contaminated material: The contaminated material will be transferred to properly labeled containers for further disposal in facilities approved by the health and environmental authority.
	Cleaning and Decontamination Procedures for Application Equipment and Contaminated Areas: The equipment (inside and outside) that contained the product should be cleaned with water (triple rinse) and the rinse water should be applied to the object of application. In contaminated areas, collect the material by normal means, transfer it to a properly identified container and send it to an approved facility for this type of waste.

SECTION 14: Transportation Information.

Regulations	Mode of transport		
	Terrestrial ADR/RID	Maritime IMDG	Aerial IATA
UN Number:	Non-hazardous goods for transport.	Non-hazardous goods for transport.	Non-hazardous goods for transport.
Official Transportation Designation:	Not applicable.	Not applicable.	Not applicable.
Class or Division:	Not applicable.	Not applicable.	Not applicable.
UN Secondary Hazard:	Not applicable.	Not applicable.	Not applicable.
Packing Group:	Not applicable.	Not applicable.	Not applicable.
Hazard identification badge according to NCh 2190:	Not applicable.	Not applicable.	Not applicable.
Environmental Hazards:	There are no environmental hazards.	There are no environmental hazards.	No environmental hazards are generated.
Bulk transport (MARPOL 972 73/78 - Annex II-; IBC Code):	There are no special precautions.	There are no special precautions.	There are no special precautions.

General Precautions:

- Transport palletized.
- Do not transport food, vegetable products or any other products that are intended for human or animal use or consumption.
- Do not transport with flammable or explosive elements.
- The conveyor must always have the safety data sheet at hand.

SECTION 15: Governing Rules.

National:

NCh No. 382 in force:	Hazardous Substances - Terminology and General Classification.
NCh No. 2190 in force:	Land Transport of Dangerous Goods - Hazard Identification Badges.
NCh No. 2245 in force:	Safety Data Sheet for Chemicals - Contents and Order of Sections.
NCh No. 2979 in force:	Hazardous Substances - Segregation and packaging in land transport.
NCh N°1411/4 in force:	Risk Prevention – Part 4: Identifying Material Hazards.
D.S. No. 298 in force:	Regulations for the Transport of Hazardous Substances on Streets and Roads.
D.S. No. 148 in force:	Sanitary Regulations on Hazardous Waste Management.
D.S. No. 594 in force:	Regulations on Basic Health and Environmental Conditions in Workplaces.
D.S. No. 43 in force:	Regulations on the Storage of Hazardous Substances.
Resolution No. 408 Exempt:	List of Substances Hazardous to Health.

International:

WMS (2019 rev8):	Globally Harmonized System of Classification and Labelling of Chemicals.
NFPA 704:	Standard System for Identifying Material Hazards for Emergency Response, 2017.

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REACH:	Regulations on the Registration, Evaluation, Authorisation and Restriction of Chemical Substances.
The recipient should verify the possible existence of local regulations applicable to the product.	

SECTION 16: Other Information.

Biological properties of the microorganisms *Trichoderma harzianum* strain Queule, *Trichoderma virens* strain Sherwood, *Trichoderma parceramosum* strain Trailes:

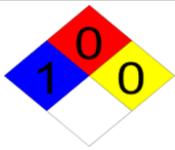
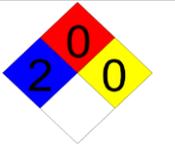
The strains of Trichonativa® Vegetables (SC) used have fungicidal action through competition, antibiosis and predation of phytopathogenic fungi. For the application of the product, the instructions on the label must be strictly followed and the safety elements must always be used.

Track Changes:	Update to NCh 2245 year 2021.
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Abbreviations and acronyms:

CAS:	Unique numerical identification for chemical compounds, polymers, biological sequences, preparations and alloys.
LD50:	Lethal dose, 50%.
CL50:	Lethal concentration, 50%.
IATA:	International Air Transport Association.
IMDG:	International Maritime Dangerous Goods Code.
ADR:	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
TAKE:	European Chemicals Agency.
EPA:	U.S. Environmental Protection Agency.
OSHA:	Occupational Safety and Health Administration.
NFPA:	National Fire Protection Association.
NCh:	Chilean Standard.
SDS:	Safety Data Sheet.
D.S.	Supreme Decree.
BCF:	Bioconcentration factor in fish.
DOT:	Department of Transportation.
NIOSH:	National Institute for Occupational Safety and Health.
FAO:	Food and Agriculture Organization of the United Nations.
NU:	United Nations (UN) number is a 4-digit serial number assigned to a hazardous substance in the United Nations system.
References:	Commodity Safety Data Sheets, EPA, ECHA, FAO, OSHA, ACGIH, DOT, NIOSH, NFPA.

Safety Sign (NCh1411/4):

	
Dermal Pathway: Blue: 1 Slight risk.	Via inhalation: Blue: 2 Moderate risk.

Current Revision Date:	30/05/2022.
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Referenced Hazard Warnings:

ATTENTION.



TRICHONATIVA® HORTALIZAS (SC)

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Release Date: 30/05/2022.

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Classification according to GHS/GHS:

Route of exposure	Hazard Category	Hazard Indication:	A Word
Oral:	Unrated.	-	-
Dermal:	Category 5.	H313: May be harmful in case of skin contact.	Attent
Inhalation:	Category 4.	H332: Harmful if inhaled.	Attent
Dermal irritation:	Category 3.	H316: Causes mild skin irritation.	Attent
Eye irritation:	Classification 2B.	H320: Causes eye irritation.	Attent
Sensitization:	Category 1B	H317: May cause an allergic skin reaction.	Attent
Aquatic Acute Fish and Aquatic Invertebrates:	The product is not expected to be toxic or pathogenic or infectious to aquatic organisms		

Date Created:	30/01/2018.
Next Revision Date:	04/11/2022.
Limitation of Supplier Liability:	In this act it is stated that the information provided in this document is timely and transparent, in accordance with the requirements of national and international standards, in turn, it is established that the inappropriate use of this product could generate damage to people, private property and/or the environment. It is advisable to read this document carefully and contact an expert for guidance if you require assistance.

The data in this fact sheet were obtained from reliable sources. The options expressed in this Safety Data Sheet are those of trained professionals. The information provided in it is currently known on the subject. Considering that the use of this information and the products is beyond the control of the supplier, the Company assumes no responsibility for this concept. It is the user's obligation to determine the conditions of safe use of the product.