

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Duratec TOP 21**
 Item Code:
 Product Use: Fertiliser
 Restriction of Use: Refer to Section 15

New Zealand Supplier: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2113

Telephone: +64 9 294 8453
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New Zealand: **0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 23 August 2022 v2

Section 2. Hazards Identification

NOT classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
ammonium nitrate	>45 - <70	6484-52-2
Borates, tetra sodium salts, pentahydrate	≤0.2	12179-04-3
Non-hazardous ingredients	To Bal	

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

If on Skin Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.

If Swallowed Clean mouth with water and drink afterwards plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell.

If Inhaled Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult. In case of lung irritation, first treatment with dexametason aerosol (spray).

Most important symptoms and effects, both acute and delayed

Symptoms: Ingestion may provoke the following symptoms:
Methaemoglobinemia
Risk: Later control for pneumonia and lung oedema.

Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically. There is no specific antidote available.

Section 5. Fire Fighting Measures

Hazard Type	Non-combustible substance with oxidizing ingredient
Hazards from combustion products	At temperatures above 130 °C, dangerous decomposition gases can be emitted: Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia
Suitable Extinguishing media	Water Not suitable: Foam, Dry chemical, Carbon dioxide (CO ₂) and Sand
Precautions for firefighters and special protective clothing	In the event of fire, wear self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
HAZCHEM CODE	None Allocated

Section 6. Accidental Release Measures

Wear protective equipment as detailed in Section 8. Clear area of any unprotected personnel. Avoid dust formation. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Use mechanical handling equipment for cleanup.

Do not empty into drains. Retain and dispose of contaminated wash water.

Section 7. Handling and Storage

Precautions for Handling:

- Keep away from direct sunlight.
- Always read label and product information before use.
- Keep away from heat.
- Protect from contamination.
- Protect from moisture.
- The product is not flammable. Keep away from heat and sources of ignition.

Precautions for Storage:

- Keep away from combustible material.
- Keep away from direct sunlight.
- Protect from contamination.
- Protect from moisture.
- Protect against water.
- When stored loose do not mix with other fertilizers.
- Keep in a dry place.
- Protect against water.

Section 8**Exposure Controls / Personal Protection****WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Ensure adequate ventilation is available

Personal Protection Equipment.

Eyes	None required.
Hands and Skin	None required.
Respiratory	Breathing apparatus only if aerosol or dust is formed. Particle filter EN 143 Type P1, low efficiency, (solid particles of inert substances).
General	At the end of the shift the skin should be cleaned and skin care agents applied.

Section 9**Physical and Chemical Properties**

Appearance	Various colours - Granular
Odour	Very Faint
Odour Threshold	Not available
pH	ca. 5 - 5,5 Concentration: 100 g/l (20 °C)
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	The product is not flammable.
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Bulk Density	ca. 1.150 kg/m ³
Solubilities	Soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	> 130 °C To avoid thermal decomposition, do not overheat.
Kinematic Viscosity	Not available
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Protect from frost, heat and sunlight. Avoid moisture.
Incompatible Materials	Sulphur, chlorites, chloride, chlorates, Hypochlorites, acid or

	alkaline reacting substances, flammable oxidizable substances, nitrites, metallic salts, metallic powder, herbicide, chlorinated hydrocarbons, organic compounds.
Hazardous Decomposition Products	Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. Product= LD50 (Rat) = >2000mg/kg
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Components:

ammonium nitrate:

Acute oral toxicity : LD50 (Rat): > 2.950 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : > 88,8 mg/l
Method: No information available.

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 402

Borates, tetra sodium salts, pentahydrate:

Acute oral toxicity : LD50 (Rat): 3.200 - 3.400 mg/kg
Method: No information available

Acute inhalation toxicity : LC50 (Rat): > 2,0 mg/l
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: No information available

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Toxicity to fish : LC50: 422 mg/l, 48 h, Cyprinus carpio (Carp), static test

Product:

Toxicity to daphnia
And other aquatic
Invertebrates : EC50: 555 mg/l, 48 h, Daphnic, static test

Toxicity to algae : No observed effect concentration: 83 mg/l, 168 h,
Desmodesmus subspicatus (green algae), other, no data available

Components:**ammonium nitrate:**

Toxicity to fish : LC50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 490 mg/l
Exposure time: 48 h

LC50 : 490 mg/l

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 1.700 mg/l
Exposure time: 10 d

Borates, tetra sodium salts, pentahydrate:

Toxicity to fish : LC50 (Fish): 74 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 242 mg/l
Exposure time: 24 h

Toxicity to algae : EC10 (Scenedesmus subspicatus): 24 mg/l
Exposure time: 96 h

Persistence and degradability	The product works in the soil as fertilizer and is diminished in a few weeks.
Bioaccumulation	Bioaccumulation is unlikely.
Mobility in Soil	No data available.
Other adverse effects	Disposal via sewage water treatment plants may cause impairment of the nitrification activity of the activated sludge., There is a high probability that the product is acute not harmful to aquatic organisms., Additional ecological information, The product has not been tested. The information is derived from the properties of the individual components., At higher pH values, which can be found in natural surface waters, an increase of toxic effects on aquatic organisms may be expected.

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

Disposal methods to avoid: None known.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2020

Section 15 Regulatory Information

NOT classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017.

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

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