SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**Duratec TOP 14**
Item Code:	
Product Use:	Fertiliser
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	HortFertplus
Address:	18 Cabernet Crescent Westgate, Auckland 0614
Telephone:	+64 9 478 5585
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	1 June 2017

Section 2. Hazards Identification

This substance is hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

EPA Approval No: Fertilisers (subsidiary) – HSR002571

Pictograms

Irritant

Chronic

Signal Word: Warning

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Category 5
6.4A	H319	Causes serious eye irritation.	Category 2A
6.8B	H361	Suspected of damaging fertility or the unborn child	Category 2
9.1D	H401	Toxic to aquatic life.	Category 4

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.

P280	Wear protective clothing.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
ammonium nitrate	≥10- <45	6484-52-2
disodium tetraborate 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).

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, dinitrogenoxide, 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 out of reach of children.
- Read label before use.
- Do not handle until all safety precautions have been read and understood.
- Wash hands thoroughly after handling.
- Avoid release to the environment.
- Wear protective clothing.
- Use personal protective equipment as required.
- Keep away from direct sunlight.
- Keep away from heat.
- Protect from contamination.
- Protect from moisture.

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.
- Store locked up.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		STEL	
Substance	**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.

Engineering Controls

Ensure adequate ventilation is available

Personal Protection

Eyes	Wear goggles with side shields. Avoid wearing contact lenses.
Hands and Skin	Wear gloves.
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, 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 oxides (NOx) and ammonia. Evolution of ammonia under influence of alkalies.

Section 11 Toxicological Information

Acute Effects:

Swallowed	May be harmful if swallowed. Product= LD50 (Rat) = >2000mg/kg
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes severe irritation to eyes
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
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

disodium tetraborate 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

HSNO Classes: 9.1D = Toxic to aquatic life.

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

Toxicity to bacteria : EC20: ca. > 100 mg/l, 0,5 h, activated sludge, 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

disodium tetraborate 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 organsims 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.
Ensure waste container holding any unwanted product or contaminated spill media is labelled "Hazardous Waste"

Precautions: depositing the substance in a landfill provided the landfill is managed to ensure that—

(i) the substance will not at any time come into contact with an explosive or flammable substance (equivalent to HSNO class 1, 2, 3 or 4); and
(ii) there is no ignition source in the vicinity of the disposal site that is capable of igniting the substance; and
(iii) if the substance were to combust, or cause or contribute to combustion, no person or place where a person may legally be, would be exposed to more blast overpressure or heat radiation than that described in regulation 7(3)(b) of the Hazardous Substances (Disposal) Regulations 2001; and
(iv) the concentration of the substance in any discharge from the landfill does not, after reasonable mixing, exceed any relevant tolerable exposure limit and/or environmental exposure limit set for the substance or any of its component(s).

Disposal methods to avoid: Do not allow to enter waterways

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15 Regulatory Information

EPA Approval Code: Fertilisers (Subsidiary Hazard) – HSR002571

HSNO Classification: 6.1E (oral), 6.4A, 6.8B, 9.1D

HSNO Controls:
Trigger quantities:

	Trigger Quantity
Approved Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	10000kg
Emergency Response Plan	10000kg

Secondary Containment	10000kg
Restriction of Use	None

Section 16 Other Information

Glossary

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

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

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Please contact the New Zealand distributor, if further information is required.

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