

SAFETY DATA SHEET

Section 1.	Identification of the material and the supplier
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Product: **Floranid Twin Turf 20-5-8**
 Item Code:
 Product Use: Fertiliser
 Restriction of Use: Refer to Section 15

New Zealand Supplier: HortFertplus
 Address: 7C Vega Place
 Rosedale, Auckland, 0632
 Telephone: +64 9 478 5585
 Fax Number: +64 9 478 5586

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 4 May 2017

Section 2.	Hazards Identification
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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
6.3B	H316	Causes mild skin irritation.	Category 3
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.
P332 + P313	If skin irritation occurs: 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
Iron Sulphate	<3	7720-78-7
Disodium tetraborate pentahydrate	<0.2	12179-04-3
Zinc sulphate	<0.05	7733-02-0

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. Wash contaminated clothing before reuse. If skin irritation or rash 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	Thermal decomposition can lead to release of irritating gases and vapours. Nitrogen oxides (NOx) and ammonia
Suitable Extinguishing media	Water Unsuitable: Foam, Dry chemical, Carbon dioxide (CO ₂), Sand
Precautions for	Self-contained breathing apparatus.

firefighters and special protective clothing	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.
 For cleanup use mechanical handling equipment.
 Do not empty into drains. Retain and dispose of contaminated wash water.

Section 7. Handling and Storage

Precautions for Handling:

- 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:

- The product is hygroscopic and should therefore be stored in a dry place.
- Store away from combustible materials.
- Do not store together with oxidizing and self-igniting products.
- Protect from contamination.
- When stored loose do not mix with other fertilizers.
- Protect from moisture.
- Keep out of reach of children.
- Store locked up.
- Keep in a dry place.

Section 8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
disodium tetra-borate pentahydrate			3 mg/m3	DE TRGS 900
Peak-limit: excursion factor (category)	8;(II)			
Further information	Commission for dangerous substances, The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
			1 mg/m3	ACGIHTLV

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium nitrate	Workers	Inhalation	Specific effects	37,6 mg/m ³
Remarks:	Exposure time: 1 d			
	Workers	Skin contact	Specific effects	21,3 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Specific effects	12,8 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Specific effects	12,8 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Inhalation	Specific effects	11,1 mg/m ³
Remarks:	Exposure time: 1 d			
iron sulphate	Workers	Skin contact	Acute effects, systemic effects	2,8 mg/kg
Remarks:	Exposure time: 24 h			
	Workers	Inhalation	Acute effects, systemic effects	9,9 mg/m ³
	Workers	Skin contact	Chronic effects, systemic effects	2,8 mg/kg
Remarks:	Exposure time: 24 h			
	Workers	Inhalation	Chronic effects, systemic effects	9,9 mg/m ³
	Consumers	Ingestion	Acute effects, systemic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Skin contact	Acute effects, systemic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Inhalation	Acute effects, systemic effects	2,5 mg/m ³
	Consumers	Ingestion	systemic effects, Chronic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Skin contact	Chronic effects, systemic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Inhalation	Chronic effects, systemic effects	2,5 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
ammonium nitrate	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	Ceiling Limit Value	4,5 mg/l
iron sulphate	Water	
Remarks:	This product has no known ecotoxicological effects.	
	Behaviour in waste water treatment plants	2483 mg/l
	Fresh water sediment	246000 mg/kg
	Marine sediment	246000 mg/kg
	Soil	276000 mg/kg

Engineering Controls

No specific controls are needed.

Personal Protection

Eyes	In case of dust formation: Safety glasses with side shields.
Hands and Skin	Normal clean work clothing and rubber gloves.
Respiratory	Breathing apparatus only if aerosol or dust is formed. Respirator with a particle filter (EN 143) P1 filter

Section 9 Physical and Chemical Properties

Appearance	Solid
Odour	Odourless
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	None
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Relative 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 ⁰ C To avoid thermal decomposition, do not overheat.
Kinematic Viscosity	Not available
Particle Size	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Keep away from heat and sources of ignition.
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 (NO _x), Ammonia. Evolution of ammonia under influence of alkalis.

Section 11 Toxicological Information

Acute Effects:

Swallowed	May be harmful if swallowed. Mixture Rules Calculation= LD50 = 4473mg/kg. Ingestion may provoke the following symptoms: Methaemoglobinemia.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes severe irritation to eyes
Skin	Causes mild skin irritation.

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.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1D = Toxic to aquatic life.

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

iron sulphate:

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

disodium tetraborate pentahydrate:

Toxicity to fish: LC50 (dab): 74 mg/l

Exposure time: 96h

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

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

zinc sulphate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,43 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1,86 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae : EC50 (Scenedesmus quadricauda (Green algae)): 0,52 mg/l
Exposure time: 120 h

Toxicity to bacteria : EC50 (Bacteria): 22,75 mg/l
Exposure time: 0,5 h

Persistence and degradability	No data available.
Bioaccumulation	Bioaccumulation is unlikely.
Mobility in Soil	Groundwater contamination is unlikely.
Other adverse effects	No data available.

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), 6.3B, 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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