

## SAFETY DATA SHEET

<b>Section 1.</b>	<b>Identification of the material and the supplier</b>
-------------------	--

Product: **Floranid Twin Eagle Master**  
 Item Code: 000000001340804899  
 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: 4 May 2017

<b>Section 2.</b>	<b>Hazards Identification</b>
-------------------	-------------------------------

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

**EPA Approval No: Fertilisers (subsidiary) – HSR002571**

**Pictograms**



Irritant

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
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.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.

P280	Wear protective clothing.
------	---------------------------

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.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
None Allocated	

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	<1 - <2	7720-78-7
N,N''-(isobutylidene) Diurea	>10 - <45	6104-30-9

### 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

<b>Hazard Type</b>	Non-combustible substance with oxidizing ingredient
<b>Hazards from combustion products</b>	Can decompose at above 100 °C. Thermal decomposition products: Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia Isobutylaldehyde
<b>Suitable Extinguishing media</b>	Water Unsuitable: Foam, Dry chemical, Carbon dioxide (CO <sub>2</sub> ), Sand
<b>Precautions for firefighters and special protective clothing</b>	Self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>HAZCHEM CODE</b>	<b>None Allocated</b>

**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.
- Wash hands thoroughly after handling.
- Avoid release to the environment.
- Wear protective clothing.
- Keep away from direct sunlight.
- Keep away from heat.
- Protect from contamination.
- Protect from moisture.

**Precautions for Storage:**

- 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.
- Keep in a dry place.

**Section 8 Exposure Controls / Personal Protection****Occupational Exposure Limits****Contains no substances with occupational exposure limit values.**

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium nitrate	Workers	Inhalation	Specific effects	37,6 mg/m <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
	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 <sup>3</sup>
	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 <sup>3</sup>
	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 <sup>3</sup>
N,N''-(isobutylidene)diurea	Workers	Skin contact	systemic effects	37,5 mg/m <sup>3</sup>
Remarks:	Continuous exposure			
	Workers	Inhalation	systemic effects	66,12 mg/m <sup>3</sup>
Remarks:	Continuous exposure			
	Consumers	Skin contact	systemic effects	18,75 mg/m <sup>3</sup>
Remarks:	Continuous exposure			
	Consumers	Inhalation	systemic effects	16,31 mg/m <sup>3</sup>
Remarks:	Continuous exposure			
	Consumers	Ingestion	systemic effects	9,375 mg/m <sup>3</sup>
Remarks:	Continuous exposure			

**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
N,N''-(isobutylidene)diurea	Fresh water	0,5 mg/l
	Marine water	0,05 mg/l
	Fresh water sediment	1,76 mg/l
	Marine sediment	0,176 mg/l
	Soil	10,7 mg/l
	Behaviour in waste water treatment plants	640 mg/l

### Engineering Controls

No specific controls are needed.

### Personal Protection

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

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Granular – various colours
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not available
<b>pH</b>	ca. 6.2, Concentration: 100 g/l (20 °C)
<b>Boiling Point</b>	Not available
<b>Melting Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	None
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Relative Density</b>	Not available
<b>Bulk Density</b>	ca. 860 kg/m <sup>3</sup>
<b>Solubilities</b>	Soluble
<b>Partition Coefficient:</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	>130°C To avoid thermal decomposition, do not overheat.
<b>Kinematic Viscosity</b>	Not available
<b>Particle Size</b>	Not available

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Conditions to Avoid</b>	Keep away from heat and sources of ignition.
<b>Incompatible Materials</b>	oxidizable substances Strong acids and strong bases
<b>Hazardous Decomposition Products</b>	Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia Isobutyraldehyd

**Section 11 Toxicological Information****Acute Effects:**

<b>Swallowed</b>	May be harmful if swallowed. Mixture Rules Calculation= LD50 = 4626mg/kg. Ingestion may provoke the following symptoms: Methaemoglobinemia.
<b>Dermal</b>	Not applicable.
<b>Inhalation</b>	Not applicable.
<b>Eye</b>	Causes severe irritation to eyes
<b>Skin</b>	Causes mild skin irritation.

**Chronic Effects:**

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

**Section 12. Ecotoxicological Information**

HSNO Classes: 9.1D = Toxic to aquatic life.

**Toxicity****Product:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: Directive 84/449/EEC, C.2
Toxicity to algae	: EC50 (Scenedesmus subspicatus): > 100 mg/l Exposure time: 72 h Method: DIN 38412
Toxicity to bacteria	: EC0 (Pseudomonas putida): ca. 640 mg/l Exposure time: 16 h Test Type: activated sludge Method: 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

**iron sulphate:**

Ecotoxicology Assessment

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

**N,N"-(isobutylidene)diurea:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): &gt; 1.000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): ca. 500 mg/l

Exposure time: 48 h

Method: Directive 84/449/EEC, C.2

Toxicity to algae : EC50 (Scenedesmus subspicatus): &gt; 500 mg/l

Exposure time: 72 h

Method: DIN 38412

Toxicity to bacteria : EC0 (Pseudomonas putida): ca. 640 mg/l

<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation</b>	Bioaccumulation is unlikely.
<b>Mobility in Soil</b>	No data available.
<b>Other adverse effects</b>	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, 9.1D

HSNO Controls:

**Trigger quantities:**

	<b>Trigger Quantity</b>
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 <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	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.

**Disclaimer**

This document has been issued by TCC (NZ) Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

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

Issue Date: 4 May 2017 Review Date: 4 May 2022