SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**Floranid N31**
Item Code:	000000002216204899
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

Section 2. Hazards Identification

This substance is <u>NOT</u> hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
N,N"-(isobutulidene) Diurea	<=100	6104-30-9

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. 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-flammable.
Hazards from combustion products	Can decompose at above 100 °C. Thermal decomposition products: Isobutylaldehyde
Suitable Extinguishing media	Water Unsuitable: Foam, Dry chemical, Carbon dioxide (CO_2), Sand
Precautions for firefighters and special protective clothing	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.

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.
- Wear protective clothing.
- Keep away from direct sunlight.
- Keep away from heat.
- Protect from contamination.
- Protect from moisture.

Precautions for Storage:

- When stored loose do not mix with other fertilizers.
- Store well away from other substances.
- Keep away from direct sunlight.
- Protect against heat.
- Protect from contamination.
- Protect against humidity (product is hygroscopic and tends to cake or disintegrate).

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
N,N''-(isobutylidene)diurea	Workers	Skin contact	systemic effects	37,5 mg/m3
Remarks:	Continuous exposure			
	Workers	Inhalation	systemic effects	66,12 mg/m3
Remarks:	Continuous exposure			
	Consumers	Skin contact	systemic effects	18,75 mg/m3
Remarks:	Continuous exposure			

	Consumers	Inhalation	systemic effects	16,31 mg/m3
Remarks:	Continuous exposure			
	Consumers	Ingestion	systemic effects	9,375 mg/m3
Remarks:	Continuous exposure			

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

Substance name	Environmental Compartment	Value
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

Eyes	In case of dust formation: Safety glasses.
Hands and Skin	Normal clean work clothing and rubber gloves.
Respiratory	Breathing apparatus only if aerosol or dust is formed.

Section 9 Physical and Chemical Properties

Appearance	White Granular
Odour	Very faint
Odour Threshold	Not available
pH	ca. 6.5, Concentration: 100 g/l (20 °C)
Boiling Point	Not available
Melting Point	205^0C
Freezing Point	Not available
Flash Point	Not available
Flammability	None
Lower Explosive Limits	120mg/m^3 Medium :air
Vapour Pressure	Not available
Vapour Density	Not available
Relative Density	Not available
Bulk Density	ca. 550 kg/m3
Solubilities: Water Solubility	2 g/l (20 °C)
Partition Coefficient: n Octanol/water	log Pow: -0,903 Method: OECD Test Guideline 107
Auto-ignition Temperature	> 140 °C
Decomposition Temperature	$>100^0$C To avoid thermal decomposition, do not overheat. Thermal decomposition above the indicated temperature is possible. The product is not capable of self-sustaining progressive thermal decomposition (UN S1).
Kinematic Viscosity	Not available
Particle Size	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions. Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.
Conditions to Avoid	No dangerous reaction known under conditions of normal use.
Incompatible Materials	None known.
Hazardous Decomposition Products	Isobutylaldehyde

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
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.

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Toxicity

Product:

Toxicity to fish : (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Test Type: LC50

Method: Directive 92/69/EEC, C.1,
Acute toxicity for fish

Toxicity to daphnia and other : EC50 (Daphnia magna): 500 mg/l
aquatic invertebrates Exposure time: 48 h
Method: Directive 84/449/EEC, C.2

Toxicity to algae : EC50 (Scenedesmus subspicatus): > 500 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:

N,N"-(isobutylidene)diurea:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 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): > 500 mg/l
Exposure time: 72 h
Method: DIN 38412

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

Persistence and degradability	The product is miscible in water and readily biode gradable in both water and soil. Accumulation is not expected.
Bioaccumulation	Bioaccumulation is unlikely.
Mobility in Soil	Adsorption to solid soil phase is not expected. The substance will not evaporate into the atmosphere from the water surface.
Other adverse effects	Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. There is a high probability that the product is acute not harmful to aquatic organisms.

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Triple rinse and dispose according to Local Regulations

Precautions and methods to avoid: None known.

Section 14 Transport Information

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

Section 15 Regulatory Information

This substance is NOT hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

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.

Disclaimer

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

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