

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: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2113

Telephone: +64 9 294 8453
 Fax Number: +64 9 294 7272

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.
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).

Most important symptoms and effects, both acute and delayed

Symptoms: None known.

Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	Non-flammable.
Hazards from combustion products	Can decompose at above 100 °C. Thermal decomposition products: Isobutyl aldehyde
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:**

- The product is not flammable.
- Keep away from sources of fire and explosion ignition - No smoking.
- Keep away from combustible materials.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Risk of explosion if heated under confinement.
- At the end of the shift the skin should be cleaned and skin care agents applied.

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/m ³
Remarks:	Continuous exposure			

	Workers	Inhalation	systemic effects	66,12 mg/m ³
Remarks:	Continuous exposure			
	Consumers	Skin contact	systemic effects	18,75 mg/m ³
Remarks:	Continuous exposure			
	Consumers	Inhalation	systemic effects	16,31 mg/m ³
Remarks:	Continuous exposure			
	Consumers	Ingestion	systemic effects	9,375 mg/m ³
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°C
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. 700 kg/m ³
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	100°C

Temperature	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	Isobutyl aldehyde

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. LD50 (Rat): > 10.000 mg/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:

N,N"-(isobutylidene)diurea:

Acute oral toxicity	: LD50 (Rat): > 10.000 mg/kg Remarks: Calculation method
Acute dermal toxicity	: LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 402

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 : EC50 (Daphnia magna): ca. 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

Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulation	Bioaccumulation is unlikely.
Mobility in Soil	Absorption 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 5433:2020

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

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