

## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **NovaTec Solub Complete 18-18-18**  
 Item Code:  
 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

**Emergency Telephone: 0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 13 February 2020

### Section 2. Hazards Identification

**This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017**

**EPA Approval No: Fertiliser (Oxidizing) – HSR002570**

#### Pictograms



Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
5.1.1C	H272	May intensify fire oxidiser.	Ox. Sol. 3
6.1E (oral)	H303	May be harmful if swallowed.	Acute Tox. 5
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
9.1D	H402	Harmful to aquatic life.	Aquatic Acute 3
9.3C	H433	Harmful to terrestrial vertebrates.	

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.

P220	Keep or store away from clothing or combustible materials.
P221	Take any precaution to avoid mixing with combustibles or incompatible materials.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

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.
P370 + P378	In case of fire: Use water for extinction.

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	≥25 - ≤35	6484-52-2
Potassium nitrate	≥30 - ≤40	7757-79-1

### 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 call doctor/physician.
If on Skin	Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.
If Swallowed	Rinse mouth with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. 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. In case of lung irritation, first treatment with dexametason aerosol (spray). Get medical advice if breathing becomes difficult.

#### Most important symptoms and effects, both acute and delayed

Symptoms:

<b>Ingestion:</b>	May be harmful if swallowed. Ingestion may provoke the following symptoms: Methaemoglobinemia
<b>Inhalation:</b>	Not applicable.
<b>Skin:</b>	Causes mild skin irritation.
<b>Eyes:</b>	Causes severe eye irritation.

**Treatment:** Treat symptomatically. There is no specific antidote available.  
**Risk:** Later control for pneumonia and lung oedema.

## Section 5. Fire Fighting Measures

<b>Hazard Type</b>	Non Flammable, Non-combustible material. Oxidiser
<b>Hazards from decomposition products</b>	Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia
<b>Suitable Extinguishing media</b>	Water Unsuitable: Foam, Dry chemical, Carbon dioxide (CO <sub>2</sub> ) and Sand
<b>Precautions for firefighters and special protective clothing</b>	Fire fighters to wear 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>1Y</b>

## Section 6. Accidental Release Measures

Avoid dust formation. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Do not empty into drains. Retain and dispose of contaminated wash water.

Use mechanical handling equipment. Dispose of according to Local Regulations detailed in Section 13.

## Section 7. Handling and Storage

### Precautions for Handling:

- Read label before use.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep or store away from clothing or combustible materials.
- Take any precaution to avoid mixing with combustibles or incompatible materials.
- Wash hands thoroughly after handling.
- Avoid release to the environment.
- Protect from contamination.
- Keep away from direct sunlight.
- Protect against heat.
- Protect from moisture.
- Wear protective clothing as detailed in Section 8.
- At the end of the shift the skin should be cleaned and skin care agents applied.

### Precautions for Storage:

- Keep out of reach of children.
- The product is not flammable.
- Keep away from heat and sources of ignition.
- Keep away from combustible materials.
- Protect from contamination. When stored loose do not mix with other fertilizers.
- Protect against humidity (product is hygroscopic and tends to cake or disintegrate)
- Protect against water.
- Keep away from direct sunlight.
- Store well away from other substances.

## Section 8 Exposure Controls / Personal Protection

### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

TWA

STEL

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. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

#### 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	36 mg/m <sup>3</sup>
Remarks:	Exposure time: 1 d			
	Workers	Skin contact	Specific effects	5,12 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Specific effects	2,56 mg/kg bw/day
Remarks:	Exposure time: 1 d			
	Consumers	Inhalation	Specific effects	8,9 mg/m <sup>3</sup>
Remarks:	Exposure time: 1 d			
potassium nitrate	Workers	Inhalation	Systemic effects	36,7 mg/m <sup>3</sup>
	Workers	Skin contact	Systemic effects	20,8 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Ingestion	Systemic effects	12,5 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Skin contact	Systemic effects	12,5 mg/kg
Remarks:	Exposure time: 1 d			
	Consumers	Inhalation	Systemic effects	10,9 mg/m <sup>3</sup>

#### 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
potassium nitrate	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	Ceiling Limit Value	4,5 mg/l
	Sewage treatment plant	18 mg/l

#### Engineering Controls

Ensure adequate ventilation is available.

#### Personal Protection Equipment



<b>Eyes</b>	Tightly fitting safety goggles.
<b>Skin</b>	Wear gloves.
<b>Respiratory</b>	Breathing apparatus only if aerosol or dust is formed. Particle filter EN 143 Type P1, low efficiency, (solid particles of inert substances).
<b>General</b>	Do not empty into drains. Retain and dispose of contaminated wash water.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Granular
<b>Colour</b>	Various
<b>Odour</b>	Very faint
<b>Odour Threshold</b>	Not available
<b>pH</b>	Ca. 4, (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>	The product is not flammable.
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Bulk Density</b>	ca. 1.150 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 material is stable when stored and used as directed.
<b>Hazardous Reactions</b>	Evolution of ammonia under influence of alkalis.
<b>Conditions to Avoid</b>	Protect from frost, heat and sunlight. Avoid moisture.
<b>Incompatible Materials</b>	Sulphur, chlorites, chloride, chlorates, Hypochlorites, acid or alkaline reacting substances, flammable oxidizable substances, nitrites, metallic salts, metallic powder, herbicide, chlorinated hydrocarbons, organic compounds.
<b>Hazardous Decomposition Products</b>	Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia

## Section 11 Toxicological Information

### Acute Effects:

<b>Swallowed</b>	May be harmful if swallowed. LD50 (rat) : >2000mg/kg
<b>Dermal</b>	Not applicable.
<b>Inhalation</b>	Not applicable.
<b>Eye</b>	Causes severe eye irritation.
<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.

**Individual component information:****Acute Toxicity:**

<b>Chemical Name</b>	<b>Oral – LD50</b>	<b>Dermal – LD50</b>	<b>Inhalation – LC50</b>
Ammonium Nitrate	>2950mg/kg (rat)	>5000mg/kg (Rat)	>88.8mg/L
Potassium Nitrate	>2000mg/kg (rat)	>5000mg/kg (Rat)	0.527 mg/l (rat)

**Section 12. Ecotoxicological Information**

HSNO Classes: 9.1D = Harmful to aquatic life.  
9.3C = Harmful to terrestrial vertebrates.

<b>Persistence and degradability</b>	The product works in the soil as fertilizer and is diminished in a few weeks.
<b>Bioaccumulation</b>	Bioaccumulation is unlikely.
<b>Mobility in Soil</b>	No data available.
<b>Other adverse effects</b>	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 organisms may be expected.

**Product/Individual component information:****Product:**

<b>Route</b>	<b>Species</b>	<b>Duration</b>	<b>Value LC50/EC50</b>
Toxicity to fish	Cyprinus carpio (Carp)	48 hr (static)	422 mg/L
Toxicity to daphnia and other aquatic invertebrates	Daphnia (water flea)	48 hr (static)	555 mg/L
Toxicity to algae	Desmodesmus subspicatus (green algae)	168hr	83 mg/L
Toxicity to bacteria	Activated sludge	0.5 hr	>100 mg/l

**Ammonium Nitrate:**

<b>Route</b>	<b>Species</b>	<b>Duration</b>	<b>Value LC50/EC50</b>
Toxicity to fish	-	96 hr	>100 mg/L
Toxicity to daphnia and other aquatic invertebrates	Daphnia (water flea)	48 hr	490 mg/L
Toxicity to algae	Selenastrum capricornutum (green algae)	10 d	1.700 mg/L

**Potassium Nitrate:**

Route	Species	Duration	Value LC50/EC50
Toxicity to fish	-	96 hr	>100 mg/L
Toxicity to daphnia and other aquatic invertebrates	Daphnia (water flea)	48 hr	490 mg/L
Toxicity to algae	Desmodesmus subspicatus (green algae)	10 d	1.700 mg/L

Do not allow to enter waterways.

### Section 13. Disposal Considerations

**Disposal Method:**

Spent media that has removed toxic chemicals should be examined for specific hazards. Spilled product may be recovered for use if it has not come in contact with liquids or been exposed to significant amounts of gaseous contaminants. Dispose of according to Local Regulations.

Ensure any container holding waste product or contaminated spill media is labelled "Hazardous Waste – Oxidiser" and that the label also has the Oxidiser Pictogram, waste type identifier, and the business name, address, and phone number.

**Precautions or methods to avoid:** Avoid release to the environment.

### Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012**

**Road, Rail, Sea and Air Transport**

<b>UN No</b>	1477
<b>Class - Primary</b>	5.1
<b>Packing Group</b>	III
<b>Proper Shipping Name</b>	NITRATES, INORGANIC, N.O.S.
<b>Marine Pollutant</b>	No
<b>Special Provisions</b>	If the product's individual container is below 5kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

### Section 15 Regulatory Information

EPA Approval Code: Fertiliser (Oxidising) – HSR002570

HSNO Classification: 5.1.1C, 6.1E(oral), 6.3B, 6.4A, 9.1D, 9.3C

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	1000kg (5.1.1C) (closed container) 100kg (5.1.1C) (open container)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000kg (5.1.1C)
Emergency Response Plan	5000kg (5.1.1C)
Secondary Containment	5000kg (5.1.1C)

**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

**References:**

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

**Disclaimer**

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

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