

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Ammonium Nitrate 18% Liquid**
Ammonium nitrate 52%

Item Code:
Product Use: Use as raw material for fertilizer solutions in agriculture and horticulture

Restriction of Use: Refer to Section 15

New Zealand Supplier: Horticulture Ltd
Address: 10 Firth Street
Drury, 2114

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

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 23 November 2022

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 (Classification) Notice 2020

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
ammonium nitrate	50 - 60	6484-52-2

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. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

If on Skin: Rinse skin with plenty of water or shower. Soap may be used. Do not apply (chemical) neutralizing agents. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Thoroughly clean shoes before re-using.

If Swallowed: Rinse mouth. Drink plenty of 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. Seek medical attention if needed.

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.

Most important symptoms and effects, both acute and delayed

Symptoms: Tingling/irritation of the skin, dizziness, headache, respiratory difficulties, irritation of the respiratory tract, vomiting, nausea, blood in stool, irritation of the eye tissue, irritation of the nasal mucous membranes.
 AFTER ABSORPTION OF HIGH QUANTITIES: Methemoglobinemia.

Advice to Doctor: Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	None Flammable
Hazards from combustion products	When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, nitrogen oxides (NOx)
Suitable Extinguishing media	Preferably: quantities of water. Water spray. Not suitable: Foam, Dry chemical, Carbon dioxide (CO ₂)
Precautions for firefighters and special protective clothing	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Exposure to fire/heat: keep upwind, consider evacuation and have neighbourhood close doors and windows.
HAZCHEM CODE	None allocated

Section 6. Accidental Release Measures

Wear protective equipment as detailed in Section 8. Clear area of any unprotected personnel. Ensure adequate air ventilation. Avoid contact with skin and eyes.

Prevent spreading in sewers. Prevent uncontrolled discharges into the environment (rivers, water courses, sewers etc.).

Any spillage should be cleaned up immediately. Collect spill in closed and suitable containers for disposal. Take up rest of liquid spill into absorbent material sand, earth, vermiculite. Scoop absorbed substance into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Dispose as per Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Use sufficient ventilation.
- Do not get in eyes, on skin, or on clothing.
- Wear protective gloves/protective clothing/eye protection as advised in section 8.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
- Do not dry up the product.
- Always wash hands after handling the product.
- Do not eat, drink or smoke during use.
- If on skin, take off contaminated clothing.
- Do not discharge the waste into the drain.

Precautions for Storage:

- Store in a cool, dry, well ventilated place away from sources of heat, ignition and direct sunlight.
- Store in original container.
- Reacts violently with (some) bases: release of heat. Do not store near oxidizing agents

or acidic material.

- Keep substance away from: combustible materials, reducing agents, (strong) acids, (strong) bases, organic materials, metals, cellulosic materials.
- Storage temperature: 0 – 30°C.
- Suitable packaging material: polyethylene, polypropylene, stainless steel.
- Material to avoid: Aluminium, iron, carbon steel, copper and monel steel

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

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 APRIL 2022 13TH 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	Long-term systemic effects	37.6 mg/m ³
	Workers	Skin contact	Long-term systemic effects	21.3 mg/kg/bw/day
	Consumers	Ingestion	Long-term systemic effects	12.8 mg/kg/bw/day
	Consumers	Inhalation	Long-term systemic effects	11.1 mg/m ³
	Consumers	Skin contact, ingestion	Long-term - systemic effects	12.8 mg/kg/bw/day

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

Substance Name	Environmental Compartment	Value
Ammonium Nitrate	Sewage treatment plant	18 mg/l
	aqua (freshwater)	0.45 mg/l
	aqua (marine water)	0.045 mg/l
	aqua (intermittent, freshwater)	4.5 mg/l

Engineering Controls

Ensure adequate ventilation is available. Good practice advice: care for eyewash stations at the workplace.

Personal Protection Equipment:

Eyes	In case of dust formation: Safety glasses
Hands and Skin	Normal working clothes are suitable
Respiratory	Ensure adequate air ventilation. No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. On heating: gas mask

Section 9 Physical and Chemical Properties

Appearance	Colourless to light yellow liquid
Odour	Odourless. Ammonia odour
Odour Threshold	Not available
pH	5 -8 (10% w/w)

Product Name: Ammonium Nitrate 18% liquid
Date of SDS: 23 November 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Boiling Point	Not available
Melting Point	169/6°C (anhydrous form)
Freezing Point	Not available
Flash Point	Not available
Crystallization temp	-6°C
Flammability	The product is not flammable.
Upper and Lower Explosive Limits	Not available
Vapour Pressure	33 kPa (@80°C)
Vapour Density	Not available
Density	1.24 kg/l (25°C)
Solubilities	Soluble in water. Soluble in acetone. Soluble in methanol. Soluble in ammonia.
Log POW	-3.1 Ammonium nitrate , 25 °C, pH 6; OECD 107
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	170 °C
Kinematic Viscosity	Not available
Particle Characteristics	Not applicable
Oxidising properties	The anhydrous product is considered to be an oxidizer.
Specific conductivity	+/- 1.2 mS/cm 1 g/l 25 °C
Other properties	Translucent. Substance has acid reaction.

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	This product can react with strong reducing or oxidizing agents. When exposed to heat, may decompose liberating hazardous gases.
Conditions to Avoid	Avoid high temperatures. Keep out of frost.
Incompatible Materials	Keep substance away from: strong acids, strong bases and oxidation agents. combustible materials. organic materials. oil
Hazardous Decomposition Products	On burning: release of toxic and corrosive gases/vapours (nitrous vapours, ammonia, carbon monoxide - carbon dioxide).

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.

Components:

ammonium nitrate:
 Acute oral toxicity : LD50 (Rat): > 2.950 mg/kg
 Method: OECD Test Guideline 401

Acute inhalation toxicity : > 88,8 mg/l
 Method: No information available.

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
 Method: OECD Test Guideline 402

Section 12. Ecotoxicological Information

Toxicity

Components:

ammonium nitrate 92%:

Toxicity to fish: 420 - 1360 (NO3/l; Chinacook salmon, rainbow trout, bluegill)

Toxicity to daphnia and other : EC50 (Daphnia 1): 555 mg/l
 invertebrates

Persistence and degradability	Biodegradable in water. Biodegradable in the soil. Nitrogen and its various forms follow the nitrification / denitrification natural cycle.
Bioaccumulation	Not bioaccumulative. LogPow: -3.1 Ammonium nitrate , 25 °C, pH 6; OECD 107
Mobility in Soil	NO3- is mobile, NH4+ is adsorbed on soil particles. Material highly soluble in water.
Other adverse effects	No data available

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.

Disposal 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 (Classification) Notice 2020.

Section 16 Other Information

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 April 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

Disclaimer

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

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