



Spraygro Liquid Fertilisers

ABN 47 007 974 496

Safety Data Sheet

Globally Harmonised System (GHS)

Compilation date	1/09/2015
Revision date	7/03/2017
Version #	2

Liquid NS 24

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name:	Liquid NS 24
CAS Number:	Not applicable, mixture
Product Code:	Liquid NS 24
Formula	Not applicable, mixture
Synonyms	Not available

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: **Fertiliser**

1.3 Details of the supplier of the safety data sheet

Company Name:	Foliar Fertilizers PTY LTD
Address:	76 Grand Trunkway, Gillman, SA, 5013, AUSTRALIA
Telephone:	+61 8 8447 7266

1.4 Emergency number

Emergency Contacts:	0438 897 977 - Product Chemist
	0407 606 409 - National Sales Manager

SECTION 2: Hazards Identification

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Acute aquatic toxicity, category 3

Skin irritation, category 2

SIGNAL WORD: **WARNING**



Hazard Statement(s):

H315: Causes skin irritation

H402: Harmful to aquatic life

Poisons Schedule: None Allocated

Precautionary Statement(s):

Prevention:

P264: Wash hands thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P362: Take off contaminated clothing.

P332+313: If skin irritation occurs: Get medical advice/attention.

Storage:

Disposal:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations

SECTION 3: Composition/Information on Ingredients

3.1 Components

Components	CAS Number	Proportion	Material Hazard Codes
water		30 to 60%	
ammonium thiosulfate	7783-18-8	30 to 60%	
ammonium nitrate	6484-52-2	1 to 10%	H272,H319
urea	57-13-6	1 to 10%	
aqueous ammonia	1336-21-6	< 1%	H314,H400,H335
other ingredients, non-hazardous	none assigned	1 to 10%	

SECTION 4: First Aid Measures

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126)

Inhalation:

If product is inhaled:

- Remove from contaminated area.
- Lay patient down, keep warm and rested.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-value mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

If aerosols are inhaled:

- Remove from contaminated area.
- Other measures are generally unnecessary.

Skin Contact:

If skin or hair contact occurs:

- Immediately flush body and clothes with water (use a safety shower if available).
- Remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Contact Poisons Information Centre.
- Transport to hospital, or doctor.

Eye Contact:

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Seek medical attention if irritation is evident.

Ingestion:

If ingestion occurs:

- For advice, contact a Poisons Information Centre, or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If vomiting occurs lean patient forward or place on left side to maintain open airway and prevent aspiration.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness. i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Transport to hospital or doctor without delay.
- Observe the patient carefully.

Signs and Symptoms of Exposure:

This product may liberate a small amount of ammonia which may cause discomfort for some people.

Chronic symptoms from overexposure of nitrates may result in methemoglobinemia.

Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

Note to Physician:

Nitrate poisoning: Arterial blood with elevated methaemoglobin levels has a characteristic chocolate-brown colour as compared to normal bright red oxygen-containing arterial blood. If methemoglobinemia is suspected, an arterial blood gas and co-oximetry panel should be obtained.

SECTION 5: Fire Fighting Measures**Extinguishing media**

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special Hazards arising from the substrate or mixture

- Avoid contamination with reducing agents, i.e. metal hydrides, phosphine's, sulfites which may liberate flammable gases.

Advice for firefighters

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

Fire/Explosion Hazard:

- Non-Combustible
- Decomposition products may produce the following toxic and/or corrosive fumes:
 - sulfur oxides
 - nitrogen oxides
 - carbon monoxide

Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

SECTION 6: Accidental Release Measures

Minor spills

- Clean up spill immediately
- Wear personal protective equipment when cleaning up (see section 8).
- This product contains ammonia which will produce vapours, use breathing apparatus.
- Clean up spill with sand or dirt or other inert material.
- Sweep/shovel for disposal. Comply with procedures laid down by local, state and federal governments.

Major Spill

- Clear area of personnel and move upwind.
- Contact Fire brigade or other hazard agency.
- For spills of this product do not allow the spill to dry as dry ammonium nitrate is more hazardous.

Prevent entry of spills to sewer and public water. Notify authorities if liquid enters sewers or public water.

SECTION 7: Handling and Storage

Precautions for Safe Handling

- Avoid skin and eye contact.
- Avoid breathing vapour.
- Wash hands and other exposed area with mild soap and water before eating, drinking or smoking.

Conditions for safe storage

- Store in a cool, dry, well ventilated place and out of direct sunlight.
- Do not store close to food or food cartons.
- Store away from incompatible materials described in Section 10.
- Keep containers closed when not in use.
- Check regularly for spills.
- Keep out of reach of children and pets.
- Do not transfer to container that does not have a breathable cap.

SECTION 8: Exposure Controls/Personal Protection

Control Parameters: No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard(s) for constituent(s):

Ammonia

TWA - $17\text{mg}/\text{m}^3$

STEL - $24\text{mg}/\text{m}^3$

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work

Appropriate Engineering Controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Use with local exhaust ventilation or while wearing a mask capable of filtering ammonia gas. Prevent concentration in hollows or sumps. Do NOT enter confined spaces where vapour may have collected.

For 1000L IBC containers, ensure a contingency plan is in place in the event of malfunction of the tap.

Personal Protective Equipment

Eye and Face Protection

- Wear goggles or face shield and take all steps to avoid splashing.
- It not recommended that contact lenses be used as they may concentrate irritants.

Skin Protection

- Wear chemically resistant LONG gloves.
- Wear rubber boots.
- Wear Apron or Overalls.
- Do not wear clothes or shoes that reveal bare skin.

Respiratory protection

- Wear respiratory that is approved for filtering ammonia gas.

SECTION 9: Physical and Chemical Properties

Physical state:	Liquid
Colour:	blue
Odour:	ammonical
pH (average):	8.5
Freezing point:	< 0°C
Boiling point:	~ 105°C
Flash point:	none
Evaporation rate:	no data
Flammability:	not flammable
Vapour pressure:	same as water
Vapour density:	same as water
Specific Gravity:	1.32 (water = 1)
Solubility:	Completely soluble in water
Partition co-efficient	no data
Auto-ignition temperature	no data
Decomposition temperature	no data
Viscosity	1 to 100 mPa.s (water = 1)

SECTION 10: Stability and Reactivity

Reactivity and Associated Hazards

- May be exothermic in the presence of reducing agents.
- May release ammonia vapour upon exposure to basic (alkaline) chemicals.

Stability

- May undergo mild container expansion over time without a breathable cap.
- Hazardous polymerisation will not occur.

Conditions to avoid

See Section 7

Incompatible materials

Incompatible with:

- Reducing agents
- Organic/Combustible materials

Hazardous Decomposition Products

- sulfur oxides
- nitrogen oxides
- carbon monoxide

SECTION 11: Toxicological Information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:

- Swallowing may result in nausea, vomiting, diarrhoea and abdominal pain.

Eye Contact:

- While the components of this liquid are not considered an eye irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort.

Skin Contact:

- Contact with skin will result in severe irritation.

Inhalation:

- The components in this liquid are not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives) and the product is non-volatile.

Chronic:

- Chronic effects adverse to the health are not considered for the components in this liquid (as classified by EC Directives). Exposure by all routes should be minimised as a precaution.

Hazards for individual components*

Components	Acute Toxicity	Irritation
ammonium thiosulfate	LD 50 for rat (oral) = 3824 mg/kg	not irritating
ammonium nitrate	LD50 for rat (oral) = 2950 mg/kg	eye irritant
urea	LD50 for rat (oral) = 11500mg/kg	not irritating
aqueous ammonia	LD50 for rat (oral) =350mg/Kg	skin/eye corrosive
other ingredients, non-hazardous	insufficient or no data	insufficient or no data

* additional toxicity data, including sensitisation, genetic toxicity, carcinogenicity can be found in the European Chemical Agency (ECHA) databases.

SECTION 12: Ecological Information

- DO NOT CONTAMINTE WATERWAYS

- Harmful to aquatic life

Ecotoxicity for product: No available data

- Ecotoxicity for individual components*

Components	Acute Aquatic Toxicity
ammonium thiosulfate	LC50 (96hr) Lepomis = 510mg/L
ammonium nitrate	LD50 (48 h) Cyprinus = 447 mg/L
urea	LC50 (96h) Leuciscus >6810 mg/L
aqueous ammonia	LC50 (96h) Rainbow trout 0.53mg/L
other ingredients, non-hazardous	insufficient or no data

* additional toxicity data, including long-term aquatic toxicity, aquatic invertebrates, algae/microorganisms can be found in the European Chemical Agency (ECHA) databases.

Persistence and degradability: No specific data on this product

Bioaccumulative Potential: No specific data on this product

Mobility in Soil: No specific data on this product

SECTION 13: Disposal Considerations

Disposal methods:

- Reuse or recycle clean containers where possible.
- Refer to local government authority for disposal recommendations. Dispose of material through a licensed waste contractor.

Normally suitable for disposal at approved land waste site.

SECTION 14: Transport Considerations

Land Transport

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Marine Transport (IMDG)

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS

Air Transport (IATA)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

SECTION 15: Regulatory Information

The components of this product are listed on the Australian Inventory of Chemical Substances (AICS) or are made from other materials (proprietary) that are also listed on the AICS.

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Poison Schedule: None Assigned (SUSMP)

SECTION 16: Other Information

This SDS was prepared using:

- The Globally Harmonized System of Classification and Labelling of Chemicals GHS (3rd Edition) 2009.
- European Chemical Agency C&L Inventory
- Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia 2011)
- Guidance on the Classification of Hazardous Chemicals under the WHS Regulations (Safe Work Australia 2011)
- Australian Inventory of Chemical Substances (AICS)
- The Poisons Standard, SUSMP No 7 (2015)
- Australian Code for the Transport of Dangerous Goods by Road and Rail. Edition 7.3
- Fan, A. M., Steinberg, V. E., *Regulatory Toxicology and Pharmacology* , 23, 35-43 (1996)

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material. Since Spraygro Liquid Fertilisers Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

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