



MANTISSA

PRODUCT SAFETY DATA SHEET

1. **Product Name:** **THIO-THIN™**
A blossom thinner to manage fruit loads in apples.

Marketed by:
Mantissa Corporation Ltd, New Zealand.

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2. **Composition**
An aqueous solution containing ammonium thiosulphate

Contains (% by wt.)		
Ammonium thiosulphate	CAS #:7783-18-8	55-60%
Ammonium sulphate	CAS #:7783-20-2	0-4%
Ammonium sulphate (s)		0.5-2.5%
Water	CAS #:7732-18-5	36-45%

3. **Hazards Identification**
Contact may cause eye irritation.
Repeated/prolonged skin contact may cause irritation.
Ingestion may irritate gastrointestinal tract.
Heating may cause ammonia gas to evolve.

4. **First Aid Measures**
- Eyes: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye and lids. Obtain medical attention if irritation occurs.
- Skin: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain medical attention if irritation occurs.
- Ingestion: If victim is conscious, give 2 to 4 glasses of water and induce vomiting. Obtain medical attention.
- Inhalation: Remove victim from contaminated atmosphere. If breathing is laboured, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain medical attention.

5. Fire Fighting Measures

Will not burn, but heating to dryness may cause the release of ammonia, ammonium sulphate, sulphur and oxides of sulphur. NH₃ (16-25%) may form flammable mixtures with air.

Extinguish fires as appropriate for combustibles involved in fire.

Fire fighters require self-contained breathing apparatus and full protective gear.

Keep containers/storage vessels in fire area cooled with water spray. Heating may cause the release of ammonia vapours.

6. Accidental Release Measures

Wear suitable protective clothing.

Small releases: Contain and cover spillage with inert absorbent material (e.g. sand or earth), transfer to containers and remove them to a safe place for disposal as chemical waste. After cleaning, flush area with plenty of water.

Large releases: Confine area to qualified personnel. Shut off release if safe to do so. Prevent entry of spillage into sewers, drains or surface waterways (potential aquatic toxicity).

Recover as much of the solution as possible. Treat remaining material as a small release (above).

7. Handling and Storage

Handling:

Avoid contact with eyes.

Use only in a well ventilated area.

Wash thoroughly after handling.

Avoid prolonged or repeated breathing of vapours.

Avoid prolonged or repeated contact with the skin.

Storage:

Store in well ventilated areas.

Do not store combustibles in the area of storage vessels.

Keep away from any sources of heat or flame.

Store tote and smaller containers out of direct sunlight at moderate temperatures.

8. Personal Protection

Wear suitable neoprene or chemical resistant protective gloves and face-shield when handling the concentrated product. If conditions exist where mist may be generated a mist respirator should be worn.

Wash contaminated clothing prior to reuse.

9. Physical and Chemical Properties

Appearance: Colourless to pale yellow liquid.

Odour: May have a slight ammonia and/or organic odour.

Specific Gravity: 1.32 - 1.35

pH: 7.0 - 8.5

10. Stability and Reactivity

This is a stable material.

Heating this product will evolve ammonia. Heating to dryness will cause the production of ammonia, ammonium sulphate, sulphur and oxides of sulphur. Ammonia (16 - 25%) may form flammable mixtures with air.

Keep away from strong oxidizers such as nitrates, nitrites or chlorates. These can cause explosive mixtures if heated to dryness. Acids will cause the release of sulphur dioxide, a severe respiratory hazard. Alkalis will accelerate the evolution of ammonia.

Ammonium thiosulphate solution is not compatible with copper, zinc or their alloys (i.e. bronze, brass, galvanized metals, etc.). These materials of construction should not be used in handling systems or storage containers for this product. (See Section 7 - Storage)

Toxicological Information

Acute Oral LD ₅₀ :	2,890 mg/Kg
Acute Dermal LD ₅₀ :	Data not available

12. Ecological Information

This product is of low toxicity to fish. Its components are readily biodegradable and bio-accumulation is unlikely to occur.

13. Disposal Considerations

Consult the local authorities before disposing of unwanted chemical. Triple-rinse and puncture used containers and dispose of as permitted by local authorities. Do not re-use containers for any purpose.

14. Transport Information

Road Transport:	Not hazardous
UN Number:	No UN Number
Proper Shipping Name:	Ammonium Thiosulphate Solution
IMDG Class:	Not Applicable
CPL Packing Group:	Not Applicable

15. Regulatory Information

No statutory phrases apply.

S2	Keep out of reach of children
S7	Keep container tightly closed
S13	Keep away from food, drink and animal feeding stuffs
S37/39	Wear suitable gloves and eye/face protection

16. Other Information

The above information is intended to give health and safety guidance on the storage and transport of the substance or product to which it relates. It is not intended to apply to the use of the product, for which purpose the product label and any appropriate technical usage literature available should be consulted and any relevant licences, consents or approvals complied with. The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate to the best of the issuer's available knowledge at the date of publication, and will be updated as and when appropriate. No liability will be accepted for any loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

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