



MATERIAL SAFETY DATA SHEET

Thio-K

Date of Issue: January 01, 2011

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name: **Thio-K**

Recommended Use: **Liquid Fertilizer**

Supplier: Campbells Fertilisers Australasia

Address: 18 Raymond Road, Laverton North, Victoria, 3026

Telephone: (03) 9931 2211

Facsimile: (03) 9931 2201

Website: www.campbellsfert.com.au

Emergency Telephone Number: (03) 9931 2211 (business hours only 8.30 am to 5.00 pm)

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

Hazard Designation: Not classified as a hazardous substance according to the criteria of NOHSC

Risk Phrases: None allocated

Safety Phrases: None allocated

ADG Classification: Not classified as a dangerous good according to the Australian Dangerous Goods Code

SUSDP Classification: Exempt from scheduling

3. COMPOSITION / INFORMATION ON INGREDIENTS

Classification and Type:

Material:	CAS Number:	Proportion (%w/w):
Potassium Thiosulfate	10294-66-3	50% (Typical)
Water	7732-18-5	50%

MATERIAL SAFETY DATA SHEET

Thio-K

Date of Issue: January 01, 2011

4. FIRST AID MEASURES

Symptoms of Exposure

- Inhalation:** Inhalation of product mist may cause irritation of the nose, throat and respiratory tract.
- Skin Contact:** Prolonged or repeated contact with product mist or solution may cause skin irritation.
- Eye Contact:** Contact with the eyes by product mist or solution may cause irritation or a burning sensation.
- Ingestion:** Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhoea. Potassium thiosulfate is considered to have a low toxicity to humans.

First Aid Actions

If medical advice is needed, have product container or label at hand.

- 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.
- Skin Contact:** Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain medical attention if irritation occurs.
- Eye Contact:** 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.
- Ingestion:** If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Obtain medical attention.
- First Aid Facilities:** Eyewash and safety shower should be available.
- Medical Personnel** Treat symptomatically.

5. FIRE FIGHTING MEASURES

- Type of Hazard:** Not flammable
- HAZCHEM Code:** None allocated
- Extinguishing Media & Methods:** As appropriate for combustibles involved in fire.
- Hazards from Combustion Products:** Heating to dryness may cause the release of sulfur and oxides of sulfur and potassium sulfate. Keep containers/storage vessels in fire area cooled with water spray. Heating may cause the release of sulfur dioxide vapours.
- Recommended Protective Clothing:** Fire fighters to wear self-contained breathing apparatus and full protective clothing when fighting fire.

MATERIAL SAFETY DATA SHEET

Thio-K

Date of Issue: January 01, 2011

6. ACCIDENTAL RELEASE MEASURES

Containment and Clean Up:	Small Releases: Confine and absorb small releases on sand earth or other inert absorbent. Use water spray to dilute to weak fertilizer solution. Large Releases: Confine area to qualified personnel. Shut off release if safe to do so. Dike spill area to prevent runoff 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).
Personal Protection:	See section 8 for appropriate PPE
Special Requirements:	Use Section 13 for instructions for the disposal of waste/contaminated material.

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:	<i>Site Requirements:</i> 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. <i>Packaging:</i> Preferably store in original container maintaining full label information.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace Exposure Standards:	No exposure standards have been set for this substance.
Engineering Controls:	Use adequate exhaust ventilation to prevent inhalation of product vapours.
Personal Protective Equipment:	<i>Specifications for Equipment:</i> No respiratory protection generally required. If conditions exist where mist may be generated, an approved mist respirator should be worn. Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse. Chemical goggles and a full face shield. <i>General Hygiene:</i> Handle with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin, and clothing.

MATERIAL SAFETY DATA SHEET

Thio-K

Date of Issue: January 01, 2011

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Pale yellow liquid
Odour:	May have a slight sulfur odour
Specific Gravity:	1.46
Boiling Point:	106°C
Freezing/Melting Point:	Not determined
Solubility:	Completely soluble with water
pH:	7.0 - 9.0
Flashpoint:	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal storage and use conditions (ambient temperature and pressure).
Hazardous Polymerisation:	Will not occur
Conditions to Avoid:	High temperatures and fire conditions.
Incompatible Materials:	Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Acids will cause the release of sulfur dioxide, a severe respiratory hazard. Potassium thiosulfate solution is not compatible with lead or mercury or their alloys. These materials of construction should not be used in handling systems or storage containers for this product.
Hazardous Decomposition Products:	Heating this product will evolve sulfur dioxide. Heating to dryness will cause the production of potassium sulfate, sulfur and oxides of sulfur. Sulfur dioxide is a respiratory hazard.

11. TOXICOLOGICAL INFORMATION

Toxicity Data:	Oral-Rat LD ₅₀ :	>5,000 mg/Kg
	Skin-Rabbit LD ₅₀ :	> 2,000 mg/Kg
	Inhalation:	No data available
	Chronic/Carcinogenicity:	No data available
	Teratology:	No data available
	Reproduction:	No data available
	Mutagenicity:	No data available
Health Effects	Liquid can irritate eyes, skin and gastrointestinal tract	

12. ECOLOGICAL INFORMATION

Potential Environmental	Static acute 96 hour-LC ₅₀ for sheepshead minnow is > 1,000 mg/L
--------------------------------	---

MATERIAL SAFETY DATA SHEET

Thio-K

Date of Issue: January 01, 2011

Interactions: Static acute 96 hour-LC₅₀ for mysid shrimp is 89 mg/L.
Avoid releasing product into streams, rivers or lakes due to potential adverse effects on aquatic species.

13. DISPOSAL CONSIDERATIONS

Product Disposal: Dispose of as directed on label. If this is not possible, dispose of at an appropriate landfill in consultation with local authorities or your supplier

Container Disposal: Triple rinse container and deposit at an approved recycler or designated collection depot. Or render packaging incapable of holding product and dispose of at an approved landfill.

14. TRANSPORT INFORMATION

UN Number: None allocated

Proper Shipping Name: None allocated

DG Class and Subsidiary Risk: None allocated

Packing Group: None allocated

HAZCHEM Code: None allocated

Special Precautions: None allocated

15. REGULATORY INFORMATION

Regulatory Status: Fertilizers do not require registration in Australia

16. OTHER INFORMATION

Edition: Initial version

Revision Due: 10 May 2015

Reason for Revision: -

Additional Information: Directions for use are found on the product label.

Glossary:

CAS Chemical Abstract Services Number, used to uniquely identify chemical compounds

LD₅₀ Lethal dose to kill 50% of test animals or organisms



MATERIAL SAFETY DATA SHEET

Thio-K

Date of Issue: January 01, 2011

NOHSC National Occupational Health and Safety Commission

PPE Personal Protective Equipment

SUSDP Standard for the Scheduling of Drugs and Poisons

This MSDS summarises our best knowledge of the health and safety hazard information available for this product and how to safely handle and use it. Since the use of this information and the conditions of the use of this product are not under the control of Campbell's Fertilisers, it is the user's responsibility to determine conditions of safe use of the product.

END OF MSDS