

# SAFETY DATA SHEET

*in accordance with amended directive 91/155/CEE*

Created on : 21/10/2004 Rev 10/10/10

Version: 3.0

Trade name: **Liquid Fertilizer Thio Plus (28,6S – 29,4S – 30,3S)**

## 1. Identification of the substance / preparation and of the company / undertaking.

Product name: **Liquid Fertilizer Thio Plus (28,6S – 29,4S – 30,3S)**

Supplier / Distributor: Agrium Europe S.A.  
 Avenue Louise 326  
 Bte 36  
 B-1050 BRUXELLES - Belgique  
 Tel. : +32 (0)2 646 70 00  
 Fax: +32 (0)2 646 68 60

Use: Nitrogenized and sulphured liquid fertilizer compound for agriculture

Emergency contact: National Chemical Emergency Centre  
 Abington  
 Oxfordshire - United Kingdom  
 Tel: +44.208.762.8322

## 2. Composition / information on ingredients:

Chemical designation of preparation:  
 Aqueous solution of mineral salts and an organic compound.

Dangerous ingredients present under classification thresholds:

Contains: Ammonium nitrate  
 No CAS: 6448-52-2 No EINECS : 229-347-8  
 Labelling: 0 - Oxidizer; R 8-9  
 Content: 38 - 42%

Contains: Ammonium thiosulphate solution  
 CAS: 7783-18-8 EINECS: 231-982-0  
 Content: 8,5 - 17%

This substance is not hazardous under 67/548/EEC.

Organic Compound:  
 Name: Urea CAS: 57-13-6 EINECS: 200-315-5  
 This substance is not hazardous under 67/548/EEC.

Salts in the mixture mainly contain the following ions:  
 Nitrate:  $\text{NO}_3^-$  Ammonium:  $\text{NH}_4^+$  Thiosulphate:  $\text{S}_2\text{O}_3^{2-}$   
 Sulphate:  $\text{SO}_4^{2-}$  Sulphite:  $\text{SO}_3^-$

## 3. Hazards identification

European classification: This preparation is not regulated according to 67/548/EEC and 1999/45/EC European Directives, their adaptations and annexes.

Hazard(s) EC : None

Physicochemical: In the event the preparation is evaporated to dryness in a fire, decomposition will release toxic gases which can support the combustion of organic matter.

For human: Prolonged contact with the skin or eyes can cause irritation. Inhalation of large quantities of product dust or liquid aerosol can cause irritation of the respiratory tract.

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For the environment: Large scale or repeated discharge of the product into stagnant water can cause algae to proliferate.

## 4. First aid measures

Inhalation: If the aerosol is inhaled, take the person out into the fresh air.

Skin contact: Remove contaminated clothing. Wash with plenty of soap and water.

Eye contact: Thoroughly rinse with water keeping the eyes wide open. Consult an eye specialist if irritation appears.

Swallowing: If the person is conscious, rinse the mouth, make him drink several glasses of water, do not try to induce vomiting. Seek medical advice if the person is ill.

## 5. Fire-fighting measures

Exinction methods: Substance is a non-combustible liquid. Use sprayed water, chemical powder or other means appropriate for extinguishing surrounding materials.

Not advised: None

Particular risks in the event of fire: Non combustible but decomposition products may cause combustion of organic substances and emission of harmful or toxic gases, See chapter 10. Risk of explosive decomposition if the product is contaminated or under confinement. Avoid pressurization.

Special equipment: Wearing a self contained breathing apparatus is strongly recommended.

Other information: Cool containers under threat of fire with water. Avoid pouring fire water down the drains.

## 6. Accidental release measures

Individual precautions for spillage / leakage : If possible avoid contact with skin or eyes. Personal precautions see Chapter 8. Stop leak if safe to do so. Contain spill and prevent from entering drains or waterways.

Cleaning up / absorption: Pump up spilled product and put it in a container. It can be used if the product is not contaminated, or forward for disposal. Clean up affected area with plenty of water.

Environmental protection precautions: Do not discharge the recovered product or clean-up water into the Environment, take steps to contain it.

## 7. Handling and storage

Handling: No special measures to take when the product is well handled. Avoid the generation of aerosols. Avoid all heating under pressure. Wash apparatus after use.

Storage: Store product above freezing (10 - 25 °C) , in a well-ventilated place. Avoid all contamination by combustible materials. Recommended packaging

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materials are plastic material (polypropylene or polyethylene) or stainless steel (316).

## 8. Exposure controls / personal protection

Specific control parameters: The product does not contain any constituent with known exposure limits.

Technical measures: Ventilation of work place.

Individual protection equipment:

Respiratory protection: Protective mask in case of aerosols.

Handling protection: Neoprene or Rubber Gloves.

Eye protection : Safety glasses.

Industrial hygiene: Wash hands after working with the product. Do not drink, eat or smoke at the work site.

## 9. Physical and chemical properties

Form: Liquid

Colour: Colourless to pale yellow, or brownish

Odour: Odourless

pH value: 7 - 8

Stage changes: Melting point/range 0 - 2°C  
Boiling point: greater than 100°C

Flash point: Not applicable – solution decomposes on evaporation to dryness

Ignition temperature: Not applicable

Explosive limits: Lower undetermined  
Upper: not applicable

Density (kg/dm<sup>3</sup>): 1,32 - 1,33 at 20°C

Water solubility: Miscible in all proportions

Log P(o/w): undetermined

## 10.-Stability and reactivity

Stability: The product is stable under normal storage conditions of use.

Conditions to avoid: None when applied and handled in accordance with conditions for use. Avoid pressurization and rise in temperature.

Substances to be avoided: Strong alkalis and acids, oils, hypochlorites, perchlorates, reducing agents

Hazardous decomposition products: At high temperatures: (> 250°C) : possible formation of NO(x), SO(x), and NH<sub>3</sub> . Possible formation of NH<sub>3</sub> by contact with highly alkaline products.

Further data: Corrosive to many metals. Consult a metallurgical specialist for compatibility information for your equipment.

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## 11. Toxicological information

Acute toxicity: Of the ingredient: Ammonium nitrate  
 Acute oral toxicity, LD<sub>50</sub> (rat) : 2500 - 3000 mg/kg (OCDE tests)  
 Of the ingredient: Ammonium thiosulphate  
 Acute oral toxicity, LD<sub>50</sub>: 1,950-2,890 mg/kg (rat, mouse)

Sub-acute or chronic toxicity: None of the main components is recorded on the IARC carcinogenic products lists.

Toxicological information: If the aerosol is inhaled: Irritation of the respiratory tracts, cough.  
 In case of prolonged contact with the skin: Possible irritation.  
 After eye contact: Possible irritation.  
 After ingestion: Possible pain in the oesophagus and stomach, reduced blood pressure, collapse and spasms.

Other information: Nitrate ingestion may reduce the oxygen carrying capacity of the blood, especially in infants (methemoglobinemia).

## 12. Ecological information

Formulation data: Mobility: Nitrates, sulphates, and ammonium ions are absorbed by soil. Soluble sulphates and nitrates not absorbed enter the aqueous phase.

Degradability: The mixture is easily degradable by plants.

Bio accumulation: Nothing known for ground and water organisms.

Ecotoxicological effects: The mixture is slightly toxic for water life. Large discharge of nitrates and phosphates into stagnant water can cause eutrophication.

Other information about ecology: There is no risk of any ecological problems when appropriately handled and used.

## 13. Disposal considerations

Product disposal: Using the product correctly should not generate waste.

Packaging Disposal: Disposal by incinerating or upgrading the material by recycling after disposing of product residue by washing with water.

## 14. Transport information

Shipping regulations:	ADR/RID/ADNR	IMDG/OMI	IATA/ICAO
Not subject to shipping regulations			

## 15. Regulatory Information

Labelling in accordance with EC directives and adapted versions of them: This preparation is labelled according to 99/45/EC Directive and rules in force.1999/45.  
 Symbol(s): None  
 R-phrases: None  
 S-phrases: None

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Its main constituents are repeated in the European EINECS substances inventory.

Regulation according to  
EC fertilizer directives:

Regulation 2003/2003/EC and Directive 76/116/EC and their appendices:  
Obligatory information for Packaging.  
Directives 82/501/EC, 87/216/EC, 88/610/EC : Main hazard, SEVESO.

## 16. Other-information

Regulatory phrases mentioned  
in chapters 2 and 3:

R8 - Contact with combustible material may cause fire.  
R9 - Explosive when mixed with combustible material.

Origin:

This data sheet was based on information supplied by the distributor.

This sheet rounds off the technical instructions but does not replace them. The information given above is based on the present state of our knowledge and experience relating to the product involved at the time of updating. It is provided in good faith. The attention of users moreover is drawn to possible risks encountered if this product is used for purposes other than those for which it was designed. Under no circumstances does this sheet release users from knowing and applying all regulations governing their businesses.