

MSDS – Material Safety Data Sheet

LAST REVISED: 06.12
MSDS NO.: ACAS 13

AG-THIRAM 800 WP

1. IDENTIFICATION OF THE SUBSTANCE

Chemical Name: Thiram
C.A.S. Number: 137-26-8
Product Identification: Beige powder
Use: Wettable powder fungicide for use as a foliar treatment and on seedbeds in several crops.
UN No: 3077
Supplier: Ag-Chem Africa (Pty) Ltd.
288 Mundt Street
Waltloo
012 - 803 0145
Emergency number: 012 - 803 0145
Poison Centre: Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
082 446 8946

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition: Thiram 800 g/kg
Ammonium sulphate 50 g/kg

3. HAZARDS IDENTIFICATION

Emergency Overview

- Harmful if swallowed.
- Irritating to the eyes, skin and respiratory system.
- Avoid all contact.
- Prevent exposure of pregnant women to Thiram.

Potential Health Effects

Ingestion:

Harmful by ingestion.

Inhalation:

Irritating to the respiratory system.

Skin Contact:

Cause skin irritation and redness.

Eye Contact:

Cause eye irritation and pain.

Routes of Exposure:

Skin and eye contact, inhalation and ingestion.

Symptoms of Poisoning:

Causes mental confusion, coughing, headache, dizziness, sore throat, skin rash and eye irritation and pain.

4. FIRST AID MEASURES

Inhalation:

Remove patient from source of exposure to fresh air. Monitor for respiratory distress. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Keep warm and at rest. Seek medical attention immediately.

Ingestion:

Have victim rinse mouth thoroughly with water. Induce vomiting by tickling the throat with finger. Never give anything by mouth to an unconscious person, nor try to induce vomiting. Apply artificial respiration and maintain blood pressure. Seek medical advice immediately. Qualified personnel should administer oxygen. Give 0,1 to 1 g ascorbic acid to improve disulphiram-ethano reaction.

Skin Contact:

Remove any contaminated clothing, shoes and leather goods. Gently wipe of excess chemical. Wash skin with soap or mild detergent and water for at least 15 minutes until no chemical remains. Get medical attention immediately.

Eye Contact:

Immediately flush eyes with lukewarm water for at least 15 minutes, lifting lower and upper eyelids occasionally. Check for and remove contact lenses after 5 minutes. Get medical attention immediately.

Note to Physician:

No specific antidote available. Ascorbic acid at a rate of 0,1 – 1 g ought to be given in order to improve disulphiram-ethano reaction.

5. FIRE FIGHTING MEASURES

Flash Point:

Fire hazard when exposed to heat or flame. Dust-air mixtures may be explosive.

Fire Extinguishing Media:

Extinguish fires with water mist, water spray or foam. Use dry chemical and carbon dioxide for small fires.

Special Information:

Fight the fire from a maximum distance. Contain fire control agents for later disposal. Remove containers from the fire area if possible. Use a recommended extinguishing agent for the type of surrounding fire. Water can be used to cool unaffected containers. Avoid inhaling hazardous vapours. Keep upwind.

Personal protective equipment:

Fire may produce irritating or poisonous vapours (toxic carbon oxides, nitrogen and sulphur) of combustion. Fire fighters and others that may be exposed should wear full chemical protective clothing and self-contained breathing apparatus with an appropriate chemical filter.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Avoid contact with skin and eyes. Do not breath fumes. Wear appropriate personal protective equipment as specified in Section 8.

Small Spills: Sweep up with damp earth or sand or other suitable absorbent. Take care not to raise a dust cloud. If necessary, wet the powder to prevent it from dispersing. Place the material into clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains.

Large Spills: Isolate the hazard area. Keep unnecessary people out. Wash the contaminated area with soap or detergent solution. Contain the spill and prevent it from entering into drains or watercourses. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations. The product is toxic to fish.

7. HANDLING AND STORAGE

Handling:

Do not get in eyes, on skin or on clothing. Avoid inhalation of dust and vapour. Use with adequate ventilation. Wash hands before eating, drinking, smoking or using the toilet. Remove contaminated clothing. Wash skin with soap and water, and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not dispose wash water where it will not contaminate crops, grazing or water sources.

Storage:

Keep in tightly closed container out of reach of unauthorized persons, children and animals. Store in its original container in a shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Protect against physical damage. Do not allow the product to become wet or overheated in storage, decomposition, impaired activity or fire may result. Not to be stored next to foodstuffs and water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation system:

It is essential to provide adequate ventilation. Ensure that control systems are properly designed and maintained. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Comply with occupational safety, environmental, fire and other applicable regulations.

Occupational Exposure Limits:

TLV/TWA: 1 mg/m³ (ACGIH 1998)

TLV/TWA: 5 mg/m³ (OSHA)

Measurement method: HPLC with UV detection; acetonitrile.

Respirator:

Wear an approved full-face respirator for protection against dusts and mists. A respirator with an appropriate filter is recommended.

Skin Protection:

Wear suitable personal protective clothing, boots, chemical resistant protective gloves, hat and equipment to prevent repeated or prolonged contact with this substance.

Eye Protection:

The use of chemical safety goggles and/or full-face shield is recommended. Maintain an eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige powder
Odour:	Slight odour of amines.
Solubility:	1,46 x 10 ⁻² g/l at 25 °C (for active ingredient)
pH:	7 (1 % solution at 20 °C)
Melting Point:	153 – 155.5 °C (for active ingredient)
Flash Point:	150 °C (open cup)

10. STABILITY AND REACTIVITY

Stability:	Considered stable in unopened packages under normal temperatures and pressures. Beyond 206 °C it decomposes. Some deterioration may occur on prolonged exposure to heat, air or moisture.
Hazardous Decomposition:	Thermal decomposition products may include toxic carbon oxides, nitrogen and sulphur.
Conditions to avoid:	Exposure to heat, air or moisture. Strong oxidisers may react violently causing fire and explosions.
Incompatibilities:	Avoid contact with alkali materials, such as lime and Bordeaux mixture.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat) = 1 900 mg/kg
Acute Dermal LD₅₀ (rabbit) = 2 000 mg/kg
Inhalation LC₅₀ (rat) = 500 mg/l/4 hr

Dermal sensitization:

May cause sensitisation by skin contact.

Skin irritation:

Mild irritant (rabbit).

Eye irritation:

Moderately irritating to eyes (rabbit).

Carcinogenicity:

IARC: Group 3. Reacts with nitrite under mildly acid pH (similar to stomach conditions), to form N-nitrosodimethylamine, which has been shown to be carcinogenic in animal studies.

Mutagenicity:

No data available.

Reproductive toxicity:

In rats, chronic feeding studies with pregnant females increases foetal mortality and offspring abnormalities. In hamsters, skeletal malformations were observed with a single dose during organogenesis.

12. ECOLOGICAL INFORMATION

Environmental Fate: The product is readily biodegraded in the environment by means of hydrolysis. It is neither accumulative nor persistent in the environment.

Accumulation: The product shows no tendency to bio accumulate in the environment.

ECOTOXICITY:

Birds:

LD ₅₀ :	Japanese quail	695 mg/kg
	Redwind blackbird	300 mg/kg

Fish:

Toxic to aquatic organisms		
LC ₅₀ (48 hr)	Bluegill sunfish	0,23 mg/l
	Trout	0,13 mg/l
	Carp	4,0 mg/l

Daphnia:

EC ₅₀ (48 hr)	0,21 mg/l (based on active ingredient)
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13. DISPOSAL CONSIDERATIONS

Product disposal:

Contaminated absorbents, surplus product, etc., should be buried in an approved landfill. Comply with local legislation applying to waste disposal. Do not allow product to contaminate ground water system and surface water.

Package material disposal:

Do not re-use empty containers for any other purpose. Do not contaminate rivers, dams, drinking water or boreholes with chemical or used container. Destroy empty container by perforation and flattening and do not use for any other purpose. Incinerate the material at a facility that complies with local regulations.

14. TRANSPORT INFORMATION

Shipping Name:	Environmentally hazardous substance, solid, n.o.s. (contains captan) 9, 12 (c), ADR
Hazard Class:	9
UN No.:	3077
Packaging Group:	III
Marine Pollutant:	Yes

15. REGULATORY INFORMATION

Danger:	Harmful (X _n)
Risk – Phrases:	R20/22 – Harmful by inhalation and if swallowed. R36/37 – Irritating to eyes and respiratory system. R68 – Possible risks of irreversible effects.
Safety Phrases:	S1/2 – Keep locked up and out of reach of children. S13 – Keep away from food, drink and animal feeding stuffs. S22 – Do not breathe dust. S24/25 – Avoid contact with skin and eyes. S36/37 – Wear suitable protective clothing and gloves. S46 – If swallowed, seek medical advice immediately and show this container and label.
National legislation:	National Road Traffic Act, 1996 (Act 93 of 1996). Fire Brigade Service Act, 1987 (Act 99 of 1987). Occupational Health and Safety Act, 1993 (Act 85 of 1993).

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

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