

FARM-AG INTERNATIONAL (Pty) Ltd

P.O. Box 1523, Durban 4000

Head Office : 61 Marshall Dr., Old Mill Industrial Park, Mount Edgecombe **South Africa**

Registration Number: 2005/011761/07

Tel + 27 31 003 3486 • Fax + 27 31 502 5825

SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

Substance: thiamethoxam
Product Name: **THOXAGUARD 600 FS**
Product Use: Insecticide
Effective Date: April 2017
Revision Date: (0)

24 Hr Emergency Number: 082 771 2712
In case of poisoning:
Poison Information Centre: 082 446 8946
Tygerberg Hospital: (021) 931 6129
Poison Emergency Enquiries (021) 689 5227
In case of Spillage:
HAZMAT: 0800 147 112

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: Thiamethoxam
Chemical Name: 3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4ylidene(nitro)amine.
(IUPAC)
CAS No.: [153719-23-4
Chemical family: neonicotinoid
Molecular formula: C₈H₁₀ClN₅O₃S
Use: Insecticide with contact, stomach and systemic activity.
Formulation: **Thiamethoxam 600 g/l**
Flowable Concentrate for seed treatment

Hazardous ingredients of toxicological concern:

<u>Inert:</u>	<u>concern:</u>	<u>% present:</u>
Thiamethoxam	harmful	± 60%
Inerts	harmful	± 12%

Symbol: **X_i, X_n, N**
Indication of Danger: Irritating, harmful and toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
RISK-PHRASE(S) R 20/22, R 36/38, R 51/R 53

SECTION 3 - HAZARD IDENTIFICATION**Toxicity class:**

WHO III;

Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

Ingestion: Harmful if ingested.**Eye contact:** May be mildly irritating to eyes. However, it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any lasting effects.**Skin contact:** May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided.

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This product is not a skin sensitizer

Ingestion: The acute toxicity of this product is low, but it may be harmful if a large amount is swallowed.**Inhalation:** May be a slight respiratory irritant.**Environmental:** Toxic to aquatic organisms.**SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS****Inhalation:**

Immediately remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Do not give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Notes to physicians: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient.

Skin contact:

Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if irritation develops and persists.

Eye contact:

Immediately flush the eyes with gently flowing lukewarm water or sodium bicarbonate solution for 20 to 30 minutes, occasionally lifting the upper and lower lids. If irritation persists, seek medical advice immediately.

Ingestion:

Do not induce vomiting. Never induce vomiting or give anything to drink to an unconscious person. If the person is alert, rinse mouth thoroughly with water and give one or two glasses of water to drink. Treat symptomatically and supportively. Call a physician or Poison Control Center.

Advice on treatment:

No specific antidote available. Treat symptomatically and supportively.

SECTION 5 - FIRE-FIGHTING MEASURES**Flash point:** Not Flammable**Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal.

Avoid the accumulation of polluted run-off from the site.

Fire fighting:

Remove spectators from surrounding area. Remove container from fire area if possible without risk. Eliminate all ignition sources in immediate area. Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind.

Personal protective equipment:

Fire-fighters and others that may be exposed should wear full protective impervious clothing, including gloves and eye protection, and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind.

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Clean all clothing before re-use. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions:

Avoid contact with skin and eyes. Do not inhale spray or fumes. For personal protection see Section 8.

Environmental precautions:

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill:

For small liquid spills, soak up with lime, damp earth or sand, or other non-combustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

SECTION 7 - HANDLING AND STORAGE REQUIREMENTS

Handling:

Harmful if swallowed. Irritant to eyes and skin. Avoid contact with eyes and skin, and inhalation of dust, spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap 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. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage:

Keep out of reach of unauthorized persons, children and animals. Store in its original labelled container in shaded, well-ventilated area. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator:

Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.

Clothing:

Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves:

Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection:

The use of safety goggles (full-face shield) is recommended.

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Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour:	Red homogeneous liquid.
Odour:	Not available
pH:	5.6 to 5.7
Wet sieve test:	99 – 98%
Adhesion to seeds:	Qualified
Portability:	2.3
Suspensibility:	87– 88%
Stability:	Stable for at least 2 years below 50 °C.

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use.

Incompatible with alkaline materials. Oxides of carbon and nitrogen may be given off when exposed to extreme heat or fire.

Conditions to avoid: Open flames, sparks, ignition sources, and dampness.

Incompatibility: Strong acids, oxidizers, dampness (in storage).

Hazardous Polymerization: Not known.

Hazardous Decomposition Products: Can decompose at high temperatures and form toxic gases.

SECTION 11 - TOXICOLOGICAL INFORMATION

Formulation and Active ingredient:

Acute oral LD50: 2605 mg/kg (cal.) & 1563 mg/kg (a.i)

Acute dermal LD50: >3333 mg/kg (cal.) & >2000 mg/kg (a.i).

Acute inhalation LC50: >3720 mg/l (a.i)

Eye irritation: Mild-irritant.

Skin irritation: Mild-irritant.

Skin sensitization: Non sensitization in guinea pigs.

Thiamethoxam tech.: ADI: 0.026 mg/kg b.w. [2006]

SECTION 12 - ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation:

Animal: Quickly and completely absorbed, rapidly distributed in the body and rapidly eliminated. The toxicokinetics and metabolism are not influenced by the route of administration, the dose level, pre-treatment, the site of label or the sex of animals. The major metabolic pathways are essentially the same in rats as in mice, goats and hens. **Plants:** Degradation or metabolism has been studied in 6 different crops with soil, foliage and seed treatment application. The qualitative metabolic pattern was similar for all types of application and for all studied crops. **Soil/environment:** Soil DT₅₀ 7 – 109 d (field, 37 soils, median 32.3 d). K_{oc} 32.5 – 237 ml/g o.c. (25 soils, mean 68.4 ml/g o.c). Photolysis

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accelerates degradation in soil. Stable in water under acidic conditions, hydrolysed under alkaline conditions. DT₅₀ in surface water 7.9 -39.5 d (la. darkness, 7 water-sediment system, mean 21.5 d). Aqueous photolysis occurs rapidly. No bioaccumulation. No significant volatilisation; efficiently degraded in air by photochemical oxidative degradation.

ECOTOXICOLOGY (technical material):

Birds: Oral LD₅₀: bobwhite quail: 1552 mg/kg and for Mallard ducks: 576 mg/kg. Dietary LC₅₀ (8 D) for Mallard ducks and bobwhite quail > 5200 mg/kg diet.

Fish: LC₅₀ (96 hours): rainbow trout: >100 mg/l, bluegill sunfish >114 mg/l and sheephead minnows >111 mg/l.

Daphnia magna: LC₅₀: 48 hours: >100 mg/l

Algae: LC₅₀ for green algae >100 mg/l

Bees: Very toxic to honeybees. LD₅₀ (Oral) 0.005 µg/bee and (Contact) 0.024 µg/bee

SECTION 13 - DISPOSAL CONSIDERATION**Pesticide and container disposal:**

Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

TRIPLE RINSE empty containers in the following manner:

Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Do not re-use the empty container for any other purposes but destroy it by perforation, flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

SECTION 14 - TRANSPORT INFORMATION

UN NUMBER: 3082

Road Transport ADR/IRD:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, Liquid, N.O.S.

Thiamethoxam 600 g/l

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Air Transport ICAO/IATA:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, Liquid, N.O.S.

Thiamethoxam 600 g/l

Flowable Concentrate for seed treatment

Maritime Transport IMDG/IMO:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, Liquid, N.O.S.

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SECTION 15 - REGULATORY INFORMATION

Symbol: Xi, Xn, N

Indication of danger: Irritating, harmful and toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

Risk phrase(s):

R 20/22 Harmful by inhalation and if swallowed.

R 36/38 Irritating to eyes and skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment

Safety phrases:

S 1/2 Keep out of reach children.

S 13 Keep away from food, drink and animal feeding stuffs.

S 22 Do not breathe dust.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

SECTION 16 - OTHER INFORMATION

Packaging:

Packed in 1, 5, 10, 12, 15, 20, 25, 50 and 200 litres HDPE Plastic containers / bottles / drums and labeled according to South African regulations and guidelines.

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

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