VILLA THIATOX FLY BAIT 100 MATERIAL SAFETY DATA

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: **THIATOX FLY BAIT 100**
Insecticide
UN No.: 3077
Supplier: **Villa Crop Protection (Pty) Ltd.**
PO Box 10413, Aston Manor 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone: +27 11 396 2233 (08:00 – 16:30)

24 Hr Emergency Numbers:
Bateleur: +27 83 1233 911 or
(Client: Villa Crop Protection) +27 860 333 911
In case of Poisoning:
Western Cape Poisons Tel. Service +27 861 555 777
Griffon Poison Information Centre +27 82 446 8946
Tygerberg Hospital +27 21 931 6129

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: **Thiametoxam**
Chemical name: 3-(2-chloro-1, 3-thiazol-5-ylmethyl)-5-methyl-1, 3, 5-oxadiazinan-4-ylidene (nitro) amine **(IUPAC)**
CAS no: 153719–23–4
Chemical family: neonicotinoid
Chemical formula: $C_8H_{10}ClN_5O_3S$
Molecular weight: 291.7
Use: Insecticide with contact, stomach and systemic activity.
Formulation: **Thiamethoxam** 100 g/kg
Water dispersible granule

Hazardous ingredients of toxicological concern:

Inert:	concern:	g/kg present:
Thiamethoxam	slightly hazardous	100
Tricosene	Slightly hazardous	0.50

Symbols: Xi, Xn, N
Indication of danger: Irritating substance
Harmful substance
Environmentally dangerous substance
Risk phrase: R 20/21/22, R 36/37/38, R51/R 53

3. HAZARD IDENTIFICATION

Toxicity Class: WHO (a.i.) III.
Skin Contact: May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitizer.
Eye Contact: This product may be slightly irritating to eyes. However, it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any lasting effects.
Inhalation: May be a slight respiratory irritant.
Ingestion: The acute toxicity of this product is low, but it may be harmful if ingested in large amounts.
Environmental: Toxic to Aquatic Organisms.
Fire and Explosion: Non-flammable and non-explosive.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: If product has been inhaled, remove the source of contamination or move victim to fresh air. Administer artificial respiration if patient is not breathing; if breathing is laboured supply oxygen. Only qualified personnel should administer oxygen. Immediately obtain medical attention.
Skin contact: Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with copious amounts of water and non-abrasive soap for 15 – 20 minutes. Obtain medical attention if irritation persists.
Eye contact: Immediately flush eyes with a stream of clean gently flowing water for at least 15 minutes, holding the eyelid(s) open. Remove contact lenses, if present, after the first 5 minutes. Obtain medical attention if irritation develops.
Ingestion: Rinse mouth thoroughly with water if person is alert. Have person drink plenty of water if able to swallow. Never give anything by mouth to an unconscious person. Do not induce vomiting, unless instructed to do so by a physician/poison control centre. If vomiting occurs keep head lower than hips to prevent aspiration. Obtain medical attention.
Advice to physician: There is no specific antidote available. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Not flammable.
Hazardous products of combustion: Product is not explosive, but dust/air mixture may be explosive in the presence of an ignition source.
Fire may produce irritating and/or toxic vapours, mists or other products of combustion.

Extinguishing Media: Extinguish fires with dry powder/dry chemical extinguisher, water fog, foam, carbon dioxide. Avoid the accumulation of polluted run-off from the site

Special Fire Fighting Procedures: Wear self-contained breathing apparatus. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may cause increase contamination hazard.

Unusual Fire and Explosion Hazards: Toxic and flammable fumes.

Firefighting: Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways.

Do not use high volume water jet, due to contamination risk. Contain water used for firefighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment: Fire may produce irritating or poisonous vapours (toxic compounds of carbon, nitrogen and chlorine), mists or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES (Spillage)

Personal precautions: Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

Environmental precautions: Do not allow entering of 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.

Considered a Marine Pollutant.

Occupational spill: Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose of it in accordance with local regulations.

Open burning or dumping of this material is prohibited. Do not get water inside containers.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Product may be irritating to eyes and skin. Avoid contact with eyes and skin and inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide 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 under lock and key and out of reach of unauthorized persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Do not store above 35°C. Do not contaminate ponds, lakes, streams or any source of water. Keep out of reach of children. Handle in a well-ventilated area. Local exhaust recommended. Use personal protective equipment to prevent contact with skin and eyes. Do not drink, eat or smoke while handling. Wash hands before eating, drinking or smoking.

Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

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

PERSONAL PROTECTIVE EQUIPMENT: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal

protective equipment including approved respiratory protection.
Respirator: An approved respirator suitable for protection from mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.
Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.
Gloves: Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.
Eye protection: The use of safety goggles is recommended.
***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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white granules.
Odour: Typical musty odour.
Flammability: Non-flammable.
Melting Point: 139.1°C (based on ai).
pH of 1 % aqueous solution: 6.4 (20°C).
Solubility in Water: Dispersible.

10. STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions for a period of 2 years. 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: Will not occur.
Hazardous Decomposition Products: Can decompose at high temperatures and form toxic gases.

11. TOXICOLOGICAL INFORMATION

Formulation:
Acute oral LD_{50}: 14912 mg/kg in rats.
Acute dermal LD_{50}: 18939 mg/kg in rats.
Acute inhalation LC_{50}:
Thiametoxam: > 2.72 mg/*l* /4 hours (rat).
Tricosene: LC_{50} (4h) for rats: 5.71 mg/m^3.
Eye irritation: Slight irritant.
Skin irritation: Mild irritant.
Skin sensitization: Non-skin sensitizer.
Carcinogenicity: Chronic inhalation exposure to an inert in the product is known to cause silicosis and pulmonary fibrosis in humans. In experimental animals, respiratory tract cancers developed after exposure to this inert. The inert is considered a human carcinogen.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation: (based on ai)
Animals: 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/metabolism has been studied in 6 different crops with soil, foliar and seed treatment application. The qualitative metabolic pattern was similar for all types of applications and for all studied crops.
Soil/Environment: Soil DT_{50} 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 accelerates degradation in soil. Stable in water under acid conditions, hydrolysed under alkaline conditions. DT_{50} in surface water is 7.9–39.5 d (lab., darkness, 7 water-sediment systems, mean 21.5 d). Aqueous photolysis occurs rapidly. No bioaccumulation. No significant volatilisation; efficiently degraded in air by photochemical oxidative degradation.
ECOTOXICOLOGY (based on ai):
Toxicity to bees: Highly toxic to bees
LD_{50} for honeybees: (oral) 0.005 µg/bee;
(contact) 0.024 µg/bee
Toxicity to fish and other aquatic organisms:
Medium toxicity to fish
LC_{50} (96 h): rainbow trout >100 mg/*l*,
bluegill sunfish >114 mg/*l*,
sheepshead minnows >111 mg/*l*
Toxicity to birds: Low to high toxicity to birds
Acute oral LD_{50}: bobwhite quail 1552 mg/kg,
mallard ducks 576 mg/kg.
Dietary LC_{50}: bobwhite quail >5200 mg/kg,
mallard ducks >5200 mg/kg.
Toxicity to earthworms and soil micro-organisms:
LC_{50} (14 d) for *Eisenia foetida* >1000 mg/kg soil.
Toxicity to other non-target organisms:
***Daphnia*:** LC_{50} (48 hour) >100 mg/*l*
Algae: EC_{50} (96 h) for green algae >100 mg/*l*

Other aquatic spp.: LC_{50} (96 h) for mysid shrimps 6.9 mg/*l*; EC_{50} (96 h) for eastern oysters >119 mg/*l*.

13. DISPOSAL CONSIDERATION

Pesticide disposal: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. 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.
Comply with local legislation applying to waste disposal.
Container disposal: Emptied containers retain vapour and product residues. Observe all labelled safeguards. Empty the container of excess product into the container of the applicator. Destroy the emptied containers by perforation and flattening. Bury in an approved dump site. Do not re-use the empty container for any other purpose.

14. TRANSPORT INFORMATION

UN NUMBER: **3077**

ADR/IRD:

Class:	9
Packaging group:	III
Shipping name:	Environmentally Hazardous Substance, Solid, N.O.S (**Thiamethoxam** 100 g/kg) (Tricosene 0.50 g/kg)

IMDG/IMO:

Class:	9
Packaging group:	III
Shipping name:	Environmentally Hazardous Substance, Solid, N.O.S (**Thiamethoxam** 100 g/kg) (Tricosene 0.50 g/kg)

ICAO/IATA:

Class:	9
Packaging group:	III
Shipping name:	Environmentally Hazardous Substance, Solid, N.O.S (**Thiamethoxam** 100 g/kg) (Tricosene 0.50 g/kg)

Considered a marine and fresh water pollutant.

15. REGULATORY INFORMATION

Symbol: Xi, Xn, N
Indication of danger: Irritating substance Harmful substance. Environmentally dangerous Substance.
Risk phrases:

R 20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R 36/37/38	Irritating to yes, respiratory system and skin.
R 51/R 53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S 1/2	Keep locked up and 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 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.

16. OTHER INFORMATION

Packaging: Packed in 50 g (plastic tub), 50, 60, 100 125, 250, 500, 625 g (foil sachet), 1, 2, 5 & 10 kg (plastic bucket). Labelled 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 nor 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.

END OF DOCUMENT
Compiled: July 2013
Reviewed: May 2017