

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**Product Name:** TALLON 480 SC**Product Use:** Insecticide**Effective Date:** May 2016**Revision Date:** June 2018**In case of Poisoning:**

Griffon Poison Information Centre : 082 446 8946

Western Cape Poison telephone service: 0861 555 777

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS**Common Name:** Thiacloprid**Chemical Name:** (Z)-3-(6—Chloro-3-pyridylmethyl)-1,3-thiazolidin-2-ylidenecyanamide (**IUPAC**)**CAS No.:** [111988-49-9]**Chemical Family:** Chloronicotinoid**Chemical Formula:** C₁₀H₉ClN₄S (Mol. wt.: 252.7)**Formulation:** Thiacloprid: 480 g/l**Suspension Concentrate****Use / Mode of Action:** Acute contact and stomach poison, with systemic properties. Used for foliar application against sucking and biting insects in pome fruit, stone, stone fruit, small barriers and vegetables.**Hazardous ingredients of toxicological concern:**Inert: % present:

Thiacloprid ± 48%

Inerts ± 3%

Symbol: N**Indication of Danger:** Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.**RISK-PHRASE(S)** R20/22, R40, R43, R 50/53**SECTION 3 - HAZARD IDENTIFICATION****Toxicity class:**

WHO II;

Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

Flammability: Not – flammable**Health effects: eyes:** In case of eye contact, rinse with large amounts of clean water. Considered as a non-eye irritant. Call for an eye specialist.**Health effects: skin:** Acute percutaneous LD₅₀ for rabbits 4000 mg/kg (cal.). May cause sensitization by skin contact.**Health effects: ingestion:** Acute oral LD₅₀ for rats 800 mg/kg (cal.). Call for medical attention**SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS**

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Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. Immediately consult a doctor.

Symptoms of human poisoning:

This product may be fatal if swallowed. The product is harmful if inhaled or absorbed through the skin. Prolong or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing.

Inhalation:

Immediately remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Avoid mouth-to-mouth resuscitation. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Seek medical advice immediately.

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 necessary.

Eye contact:

Flush eyes immediately with large amounts of gently flowing cold water or normal saline solution, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, get medical attention.

Ingestion:

Have victim rinse mouth thoroughly with water. Do not induce vomiting, due to the aromatic solvent. Seek medical advice immediately. If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person. Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen. Qualified medical personnel should perform administration of gastric lavage or oxygen.

Advice to physician: There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's conditions is recommended.

SECTION 5 - FIRE-FIGHTING MEASURES

Fire/Explosion hazard:

Non-flammable

Flash point: not available

In the event of fire the following can be released: hydrogen chloride (HClO), carbon monoxide (CO).

Nitrogen oxides (NO_x), Hydrogen cyanide (hydrogen acid), sulphur oxides.

Extinguishing agents:

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. 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. 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. Dike 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 fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

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Personal protective equipment:

Fire may produce irritating or poisonous vapours or gases (oxides of chlorine and sulphur) or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

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. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. 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. Seek medical advice. 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. Worker should shower at the end of each work day. Launder all clothing before it is re-used again.

Storage:

Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

Storage stability:

Stable, avoid excessive heat and moisture conditions.

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.

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Eye protection:

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

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------------|--------------------------------|
| Appearance: | Suspension concentrate/ liquid |
| Odour: | Odourless |
| Relative density: | 1.20 g/mg at 20 °C. |
| Solubility in water: | Soluble |
| Viscosity: | 126000 mPa.s. at 20 °C |
| Flash point: | Not available |
| Flammability: | Non-Flammable |
| pH: | 4 to 9 |
| pH of 1% aqueous dilution: | 7 – 9 (5%) dispersion in water |

SECTION 10 - STABILITY AND REACTIVITY**Storage stability:**

Stable at elevated temperatures and at low temperatures. Do not store near crop protection chemicals, feed, fertilizers or seed.

Decomposition properties:

Decomposes above melting point and stable on visible light.

Condition to avoid:

Avoid excessive heat and moisture conditions.

Hazardous decomposition:

No data available.

Hazardous Polymerisation:

Not known to occur.

SECTION 11 -**Acute oral LD₅₀:**

800 mg/kg cal. (Formulated product)

Acute dermal LD₅₀:

4000 mg/kd cal. (Formulated product)

Acute skin irritation: Non-skin irritant

Acute eye irritation: Non-irritant to eyes

Sensitization: Non-skin sensitiser

Chronic Toxicity: Thiachloprid caused secondary effect due to significant liver enzyme induction in the liver, thyroid, adrenals, uterus and /or ovaries in chronic studies in rats, mice and dogs. Reproductive & development Thiachloprid is not considered a primary reproductive toxicant in rats. Reproductive effects were observed but were considered secondary to maternal toxicity. It is not considered a primary development toxicant in rats and rabbits. Developmental effects were observed at doses that cause maternal toxicity. Neurotoxic Thiachloprid was not a neurotoxicant in acute. Sub-chronic and developmental neurotoxicity screening studies in rats.

Mutagenicity: Thiachloprid was not genotoxic based on the overall weight of evidence in battery of vitro and vivo test.

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Carcinogenicity: Thiachloprid demonstrated evidence of oncogenicity in life time feeding studies in rats (thyroid and uterus) and mice (ovary). These effects, however, were observed only at high doses, which did not affect hepatic enzyme activity. At low doses, which did not affect hepatic enzymes, there was no evidence of oncogenicity.

ADI: 0.01 mg/kg b.w. [2006] (tech.)

SECTION 12 - ECOLOGICAL INFORMATION**Mobility, Degradability & Accumulation:**

In animals: Thiachloprid was quickly and completely absorbed from gastrointestinal tract, followed by a fast and uniform distribution to the tissues of the rats. The major portion of the administered dose was quickly eliminated with urine and faeces. There was no indication of accumulative behaviour in rats. Beside the parent compound, 26 metabolites were identified in urine and faeces. Metabolisms proceed by the oxidation of the thiazolidine ring, hydroxylation of the thiazolidine ring and the cyanamide moiety, opening the thiazolidine ring and oxidative cleavage of the methyl bridge. In goats the compound was also found quickly excreted, mainly with the urine. Only very small amount was secreted with the milk. Similarly in poultry, only a minute amount was found in the eggs. **In plants:** Metabolism in tomatoes, apples, cotton and wheat, after spray application and in rice, after nursery box treatment, is similar in all crops. The parent compound is always the major component at harvest. Hydrolysis, oxidation and conjugation of the parent compound were the main degradation steps. **In the soil:** Soil DT₅₀ (6 soils) 7-21 d. soil mobility (6 soils) low to medium. Mean K_{oc} 615 (6 soils).

ECOTOXICOLOGY:**Birds:**

LD₅₀: Bobwhite quail: 2716 mg/kg, Japanese quail 49 mg/kg (tech.)

LC₅₀ 5-day diet: Bob white quail :> 5459 mg/kg (tech.)

Fish:

LC₅₀ (96 hours): Bluegill sunfish: 25.2 mg/l (formulation)

Rainbow trout: 30.5 mg/l (tech.)

Daphnia:

Daphnia magna: 48-hour LC₅₀: ≥85.1 mg/l (formulation)

Bees:

LD₅₀ oral (90 hours): > 17.32 µg/bee (tech.) Contact 38.83 µg/bee (tech.)

Earthworms:

Eisenia foetida LC₅₀ (14 d, 20 °C) 105 mg/kg (tech.)

Algae and Aquatic plants:

For Scenedesmus subspicatus LD₅₀ 97 mg/l (72h) and Pseudokirchneriella subcapitata >100 mg/l (tech.)

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.

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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.

Thiaclopid: 480 g/l**Suspension Concentrate****Air Transport ICAO/IATA:**

Class: 9

Packing group: III

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

Thiaclopid: 480 g/l**Suspension Concentrate****Maritime Transport IMDG/IMO:**

Class: 9

Packing group: III

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

Thiaclopid: 480 g/l**Suspension Concentrate****SECTION 15 - REGULATORY INFORMATION****Symbol:** N**Indication of danger:** Very 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.**R40** Limited evidence of carcinogenic effect.**R43** May cause sensitization by skin contact.**R 51/53** Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment**R63** Possible risk of harm the unborn child.**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**

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Packaging:

Packed in 1, 5, 10, 20 and 25 litres plastic containers 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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