Herbicide Safener



THEORY 960 EC

Reg. No. L 10494 Act No. 36 of 1947 W 1301244

2: 18/1/2023 - June2023

An emusifiable concentrate seed treatment product to protect Grain sorghum against the phytotoxic effects of S-metolachlor / metolachlor containing pre-emergence herbicides.

ACTIVE INGREDIENT

fluxofenim (oxime-ether) 960 g/e





WARNING

Harmful if swallowed Harmful in contact with skin. Causes mild skin irritation. Causes serious eve irritation. Harmful if inhaled. Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Do not eat, drink or smoke when using this product. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



Registration holder: VILLA CROP PROTECTION (PTY) LTD. Co. Reg. No. 1992/002474/07 P.O. Box 10413, Aston Manor, 1630 Tel. (011) 396 2233

Website: www.villacrop.co.za 24 HR EMERGENCY NUMBERS:

Griffon Poison Centre: +27 82 446 8946 24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411 (Client: Villa Crop Protection)

THEORY 960 EC

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ACTIVE INGREDIENT:

Registration holder:

VILLA CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07 PO Box 801, KEMPTON PARK, 1620,

Tel. (011) 396 2233

WARNINGS

Hazard statements:

Harmful if swallowed.

Harmful in contact with skin.

Causes mild skin irritation.

Causes serious eye irritation.

Harmful if inhaled.

Very toxic to aquatic life with long lasting effects

Do not eat, drink or smoke when using this product.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- · Handle with care.
- Store in the original, tightly closed container in a cool, dry, well-ventilated place.
- Store away from food, feeds, seed and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.
- Do not feed seed treated with THEORY 960 EC to livestock.
- In case of poisoning call a physician immediately and make this label available to him/her.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions, because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label as well as by the method, time and accuracy of application. The registration holder further does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in event of any uncertainty.

PRECAUTIONS

Precautionary statements:

Avoid breathing dust, fume, gas, mists, vapours or spray.

Wash hands and face thoroughly after handling. Do not touch eyes.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid release into the environment.

Wear impervious rubber gloves and chemical safety goggles.

IF SWALLOWED: Get medical help.

IF ON SKIN: Wash with plenty water and non-abrasive soap.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Rinse mouth.

If skin irritation occurs: get medical help.

If eye irritation persists: Get medical help.

Take off contaminated clothing and wash it before reuse.

Collect spillage.

Dispose of contents/container in accordance with local regulations

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- Clean application equipment after use. Do not dispose of wash water where it can contaminate other crops, grazing, boreholes, rivers or dams.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Invert the empty container over the spray or
 mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse
 the empty container three times in succession with one quarter of the container volume fresh water and
 decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an
 approved collector or recycler www.croplife.co.za. Do not bury, burn, or donate the container to any other
 parties that may use it as a container for food or beverages.

Relevant hazardous components		
Fluxofenim	960 g/ℓ	
Calcium Dodecylbenzene Sulfonate	< 5 g/ℓ	
Solvent oil (S-200)	< 5 g/ℓ	

SYMPTOMS OF HUMAN POISONING

This product may cause irritation to eyes, skin or respiratory tract.

FIRST AID TREATMENT

<u>If poisoning is suspected</u>: Remove the person from the source of poisoning to a well-ventilated area and keep him/her calm and at rest. Immediately call a physician.

- <u>Skin</u>: Remove contaminated clothing and rinse the contaminated body area thoroughly with non-abrasive or mild detergent and large amounts of water, until no evidence of chemical remains. Do not rub the skin. Get medical attention if irritation occurs and persists.
- <u>Eyes</u>: Flush eyes with clean water for at least 20 minutes, occasionally lifting upper and lower lids. If irritation occurs and persists, obtain medical attention.
- <u>Inhalation</u>: Remove patient from the source of contamination and keep him/her calm and at rest. Keep air passage open. Get medical attention immediately.
- <u>Ingestion</u>: If the person is alert and conscious, immediately give 1 to 2 glasses of water to drink and induce vomiting. Never give anything by mouth to an unconscious person. Apply artificial respiration if necessary.

NOTE TO PHYSICIAN

No specific antidote is known in case of ingestion. Treat symptomatically. It is recommended to induce emesis or lavage stomach. Based on the acute oral LD_{50} to rats, ingestion of 2 tablespoons or more may be fatal to an adult human. Medical conditions likely to be aggravated by exposure: persons with allergy history or pre-existing dermatitis should use extra care in handling this product due to the presence of a small amount of 2-bromomethyl-1,3-dioxolane.

Mode of Action: **THEORY 960 EC** is a herbicide safener for metolachlor. It rapidly penetrates seeds. It works by the enhancement of cytochrome P450-mediated oxidative metabolism (detoxification) of the co-applied herbicide in the crop.

USE RESTRICTIONS

• Do not use **THEORY 960 EC** on poor quality seed.

DIRECTIONS FOR USE: Use only as directed.

- THEORY 960 EC is applied at 15 mℓ per 50 kg seed. A seed treatment solution is made by adding 15 mℓ THEORY 960 EC to 235 mℓ water in order to prepare a final 250 mℓ seed treatment solution.
- A concrete mixer or off-centre drum with a capacity of 150 to 200 litres is suitable for the treatment of 50 kg seed.
- The efficacy of the treatment may be adversely affected if the concrete mixer or off-centre drum used, is filled to more than half its capacity with seed.

PRODUCT PROPERTIES

THEORY 960 EC is a seed treatment product which protects grain sorghum against the phytotoxic effects
of S-metolachlor containing pre-emergence herbicides (including formulations containing the "old"
metolachlor which contains 65 % S-metolachlor isomer).

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- Without a THEORY 960 EC seed treatment, products containing S-metolachlor (e.g. Palladium Plus 915 EC, Palladium 960 EC, Palladium Ultra 660 SC, Terbuclear 600 SC) will cause severe crop injury to Grain sorghum.
- **THEORY 960 EC WILL NOT** provide sufficient protection of Grain sorghum related forage grasses such as Sudan grass, Sudan sorghum crosses or crops other than **Grain sorghum**, against the phytotoxic effects of **S-metolachlor**.

APPLICATION RATES

Crop / Use	Dosage Rate	Remarks
Seed Treatment		THEORY 960 EC may be applied to the seed by means of a clean concrete mixer or off-centre drum.
		1. Concrete Mixer: First equilibrate the inside of the mixer by wetting it thoroughly with 250 mℓ of the seed treatment solution before treating the seed in the mixer.
	15 mℓ THEORY 960 EC per 50 kg seed	Load 50 kg of seed into the mixer and distribute 250 m/ of the seed treatment solution evenly over the seed during rotation. Continue rotation for two (2) minutes until all seed is wetted uniformly.
	Prepare a seed treatment solution adding 15 m/THEORY	If the seed is not visually uniformly wetted after two (2) minutes, continue with rotation until all seed is uniformly wetted with the solution.
	960 EC to 235 m/ water in order to prepare a final 250 m/ seed treatment solution.	2. Off-centre drum: If a concrete mixer is not available, an off-centre drum can be used to treat the seed. First equilibrate the inside of the mixer by wetting it thoroughly with 250 m/ of the seed treatment solution before treating the seed in the mixer.
		Load 50 kg of seed into the mixer and distribute 250 m/ of the seed treatment solution evenly over the seed by rotating the drum at a constant speed for at least 3 minutes until all the seed is wetted uniformly.
		If the seed is not visually uniformly wetted after three (3) minutes, continue with rotation until all seed is uniformly wetted with the solution.

IMPORTANT NOTES

- Seed should first be treated with THEORY 960 EC and allowed to dry before being treated with a fungicide/insecticide.
- **THEORY 960 EC** treated seed can be planted as soon as it dried off after treatment. Adequate protection against **S-metolachlor** / **Metolachlor** will still be obtained.
- Consult the S-metolachlor / Metolachlor containing product labels for WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE on Grain sorghum
- Also refer to the applicable fungicide an insecticide seed treatment labels for mixing, rates and carry-over seed.

The following products mentioned in this label may be replaced with equivalent products:

- PALLADIUM PLUS 915 EC (L 9359 / W 1301000) = PENTIUM PLUS 915 EC (L 9741) (S-metolachlor + benoxacor),
- PALLADIUM 960 EC (L 9360 / W 130772 / N-AR 2242) = PENTIUM 960 EC (L 9830) (S-metolachior),

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- PALLADIUM ULTRA 660 SC (L 9922) = PENTIUM ULTRA 660 SC (L 9924) (S-metolachlor + atrazine + benoxacor) and,
- TERBUCLEAR 600 SC (L 10506 / W1301416 / N-AR 2240) = TERBUGOLD 600 SC (L 10507) (S-metolachlor + terbuthylazine).

PENTIUM 960 EC, PENTIUM PLUS 915 EC, PENTIUM ULTRA 660 SC and TERBUGOLD 600 SC are registered products of UNIVERSAL CROP PROTECTION (PTY) LTD.

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