DIRECTIONS FOR USE ENCLOSED Batch Number:

Herbicide



PENTIUM 960 EC

Reg. No. L 9830 Act No. 36 of 1947

3:11/6/2022 - Nov2022



A pre-emergence emulsifiable concentrate herbicide for the control of most annual grasses and certain broad-leaved weeds in dry beans, groundnuts, soybeans, sunflowers, grain- and forage sorghum, sugarcane, potatoes, tobacco, lupins and forestry plantations/areas as well as early post emergence in maize.

ACTIVE INGREDIENT

s-metolachlor (chloroacetamide)

960 a/e

GROUP

15

HERBICIDE



Hazard Statements:

May be harmful if swallowed. May be harmful in contact with skin. Harmful if inhaled.

May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.

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

Avoid release into the environment.



Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1983/008184/07

P.O. Box 801, Kempton Park, 1620 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)

PENTIUM 960 EC

Reg. No. L 9830 Act No. 36 of 1947 HRAC HERBICIDE GROUP CODE: 15

ACTIVE INGREDIENT:

s-metolachlor (chloroacetamide) 960 g/*t*

Registration holder:

UNIVERSAL CROP PROTECTION (PTY) LTD. Co. Reg. No. 1983/008184/07

PO Box 10413, ASTON MANOR, 1630 Tel. (011) 396 2233.

WARNINGS

Withholding periods:

	Minimum number of days between the last application and harvest:	
Pecan nuts		95 days

Hazard statements:

May be harmful if swallowed.
May be harmful in contact with skin.
Harmful if inhaled.
May cause an allergic skin reaction.
May be fatal if swallowed and enters airways.
Very toxic to aquatic life with long lasting effects

- Handle with care.
- Store in a cool place away from food, feeds, seed, fertilizers and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.
- In case of poisoning call a doctor and make this label available to him/her.
- Re-entry: Do not enter treated field within one (1) day after application unless wearing protective clothing.

Aerial application:

Notify all inhabitants in the immediate vicinity of the lands to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

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 soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weeds against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore 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, fumes, mists, gas, vapours or spray.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release into the environment.

Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.

IF SWALLOWED: Get medical help.

IF ON SKIN: Wash with plenty of water and non-abrasive soap. Get medical help.

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

If skin irritation or rash occurs: Get medical help.

Collect spillage.

Dispose of contents/container in accordance with local regulations.

PENTIUM 960 EC PAGE 2 OF 34

- In case of accidental contact with skin or eyes, flush with plenty of cold water and get medical attention if necessary.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.
- Prevent drift on to other crops, grazing, rivers, dams and areas not under treatment or to nearby water sources by using a suitable drift retardant such as **INTERLOCK**® (L 10254 / W 130875 / N-AR 1856).
- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- TRIPLE RINSE empty containers by inverting 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). Where possible, recycling is preferred to disposal or incineration. If recycling is not
 practicable, dispose of in compliance with local regulations. Observe all labelled safeguards until container is
 destroyed.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

Relevant hazardous components				
S-metolachlor 960 g/ ℓ				
Aromatic hydrocarbon	< 10 %			
Tristyryl Phenol ethoxylate	< 8 %			

SYMPTOMS OF HUMAN POISONING

Irritation effects on skin and mucous membranes are the most common reactions. May cause irritation to the eyes. Allergic skin reaction may occur. May cause skin sensitization. Large ingestions can cause nausea, vomiting, abdominal distress and diarrhoea.

FIRST AID TREATMENT

- <u>Skin contact:</u> Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- Eye contact: Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after five (5) minutes and continue rinsing.
- <u>Inhalation:</u> Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. **Seek medical attention if you feel unwell after inhalation**.
- <u>Ingestion:</u> Seek medical attention or call a poison control centre for treatment advice. **Do not induce vomiting** unless instructed to do so by a poison control centre or doctor. **Do not** give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

NOTE TO PHYSICIAN

No specific antidote. Treat symptomatically and supportively. Keep patient under observation. Perform gastric lavage and catharsis if the victim is not unconscious. If less than 10 mg per kg body weight was ingested, administer 30 to 60 g activated charcoal in 150 to 300 m/ water.

Mode of Action:

PENTIUM 960 EC contains **S-metolachlor**, a chloroacetamide compound which belongs to HRAC group 15. It is used as a pre-, early post-emergence and pre-plant incorporated herbicide for the control of annual grass and some broad leaf weeds. **S-metolachlor** is a selective herbicide which is absorbed primarily by hypocotyls and shoots and in turn inhibits germination.

RESISTANCE WARNING

PENTIUM 960 EC is a group code 15 herbicide. Any weed population may contain individuals naturally resistant to **PENTIUM 960 EC** and other group code 15 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **PENTIUM 960 EC** or any other group code 15 herbicide.

To delay herbicide resistance:

 avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes,

PENTIUM 960 EC PAGE 3 OF 34

• integrate other control methods (chemical, cultural, biological) into weed control programmes. For specific information on resistance management contact the registration holder of this product.

USE RESTRICTIONS

- PLEASE NOTE: PENTIUM 960 EC SHOULD NOT BE USED as a pre-emergence treatment in maize (prior to maize germination), as this will result in severe crop damage.
- PENTIUM 960 EC as a solo application does not have a re-cropping interval. However, should PENTIUM 960 EC be used in a tank mixture with other herbicides, the relevant labels should be consulted and the <u>RE-CROPPING INTERVALS</u> on the respective labels should be adhered to. The re-cropping intervals refers to the waiting period that should lapse between application of PENTIUM 960 EC in a tank mixture with different herbicides and the planting of follow-up crops, to prevent damage to the next crop.
- Do not apply PENTIUM 960 EC to poorly drained soils or soils with a compaction layer, as waterlogging and herbicide injury may occur.
- Heavy rain (25 mm per day or 50 mm over a 3- to 7-day period) on very sandy soils (< 15 % clay) low in organic matter (< 1 %), as well as flood irrigation can reduce weed control performance.
- PENTIUM 960 EC may damage the following crops under conditions as mentioned: Dry beans on fields where monoculture is practiced, and soil borne diseases are prevalent, also dry beans and sunflowers on shallow, sandy, waterlogged soils with an impermeable clay layer at less than 100 cm depth. PENTIUM 960 EC damage to dry beans is sometimes associated with hot, dry weather and a plough-sole in the soil. Forage sorghum and tobacco can be damaged if planted on sandy and/or gravel soils or where flood irrigation is performed.
- When **PENTIUM 960 EC** is applied to dry beans or grain sorghum, the seed must be treated with effective fungicides to control seedling diseases, such as *Pythium* spp., *Rhizoctonia* spp., etc.
- Use restrictions for any herbicides used in combination with PENTIUM 960 EC, must be adhered to.
- If Triazine sensitive crops such as groundnuts, kidney beans, cotton, dry beans, soybeans, sunflowers, wheat, vegetables, cotton and tobacco are planted as follow-up crops, the application rates of Agrizine 500 SC and Terbusien Super 600 SC should not exceed 2.0 litres per hectare. These low rates may still damage follow-up crops on the very sandy soils of the North-Western Free State or on calcareous soils and weed control may not always be satisfactory.

<u>DIRECTIONS FOR USE:</u> Use only as directed.

Compatibility:

- PENTIUM 960 EC is compatible with Sundry 500 WP/Symphony 500 WP, Radical 250 EC/Rapid 250 EC, AMETRYN 500 SC (L 7742), MCPA 400 SL (L 5793 / N-AR 1092 / W1301410), 2,4-D AMINE 480 SL (L 4505 / N-AR 1096 / W 130459), Slash Plus 540 SL / Panga Plus 540 SL / Lynch Plus 540 SL, Gatling 700 SC/Brenno 700 SC, Extend 800 WDG/Develop 800 WDG, METRIBUZIN 480 SC (L 4374), AGRIZINE 500 SC (L 5387 / W 130121), Cantron® 480 SC/Astron® 480 SC/Canonne 480 SC, Cantron® Smart 500 SC/Astron® Smart 500 SC,TERBUSIEN SUPER 600 SC (L 5435 / N-AR 1110 / W 130958), Terbucide Plus 900 WDG/Terbuweed Duo 900 WDG, Terbucide 600 WDG/Terbuweed 600 WDG, Nicoron 750 WDG/Nicosulfuron 750 WDG, Halo 750 WDG/Crown 750 WDG, Lumen 420 SC/Loupe 420 SC/Lumina 420 SC, Pentium Ultra 660 SC/ Palladium Ultra 660 SC/Partisan Ultra 660 SC, Terbugold 600 SC/Terbuclear 600 SC/Partisan Gold 600 SC, THEORY 960 EC (L 10494), DESTINAIRE® (L 10598), Interlock®, CLASS ACT® NG, (L 10477), METRICANE 700 WDG.
- If tank mixtures are performed with other products, small quantities of the products in the correct ratio should be mixed with the appropriate quantity of water, to determine compatibility.
- Water quality and formulation of other products may influence compatibility.

Mixing instructions:

- Shake container well before use. Close container after use.
- Half fill the spray tank with clean water; add the required amount of PENTIUM 960 EC, while maintaining agitation. Then complete the filling operation.
- When mixing PENTIUM 960 EC with other herbicides, use the following procedure:
 - 1. fill the spray tank three quarters with clean water. Add the required amount of complementary herbicide to the water, agitating continuously,
 - 2. continue filling the spray tank with water and add the required amount of **PENTIUM 960 EC** just before the tank is filled, to its full level.
- Ensure thorough agitation of the mixture in the tank during mixing and spraying.

PENTIUM 960 EC PAGE 4 OF 34

- Spray mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.
- Thoroughly flush out spraying equipment at the end of the spraying operation.

Post Spray Equipment Cleaning

It is essential to rinse the spray tank and all hoses with a 0.1% solution of either calcium chloride or ammonium hydroxide or the recommended rate of **Protank® liquid cleaner** according to the product label. Allow this solution to stand in the spray equipment for 15 minutes; empty the spray equipment; repeat the rinsing with a 0.1 % solution of calcium chloride or ammonium hydroxide for 15 minutes; rinse all equipment with water. Nozzles and fitters must be cleaned individually. Rinse water and solution should be drained in a cesspool or drain where it will not contaminate any water source.

Application recommendation:

- Use accurately calibrated equipment with properly arranged suitable nozzles and an efficient agitation mechanism.
- Prepare a fine, even and firm seedbed free of weeds, trash and clods.
- Use 200 litres spray mixture per hectare for overall ground application and 30 to 40 litres per hectare for aerial application.
- **PENTIUM 960 EC** can also be shallowly incorporated early in the season to improve reliability of weed control.
- 10 to 20 mm rain within 7 to 10 days after application is necessary for good results.
- Under dry conditions, weed seedlings may emerge. These are usually stunted and can be controlled with a shallow cultivation, which also mixes the herbicide with the top 10 to 20 mm of soil.
- If soil crusting becomes a problem, rotary harrow in the same direction that the rows are planted, to assist emergence.
- Harrowing after application may reduce weed control if untreated soil is thrown into deep planter furrows.
- **PENTIUM 960 EC** has no post-emergence activity and can be applied post-emergence to the crop after a cultivation, when no weeds are present.
- Ensure that sufficient fertilizer is placed near the seed at planting, to promote vigorous seedling growth.

Aerial Application:

Aerial application of **PENTIUM 960 EC** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- <u>Flying height</u>: The height of the spray boom should be maintained at 3 to 4 meters above the target. Do not spray when aircraft is in a climb, at the top of, or during a dive, or when banking.
- Use suitable <u>atomising equipment</u> (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field). The operator must use a setup that will produce a droplet spectrum with the lowest possible Relative Span. All nozzles/atomisers should be positioned within the inner 60 % to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in <u>temperature</u> between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the <u>wind speed</u> exceeds 15 km per hour.
- Aerial application of this product must not be done under <u>turbulent</u>, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of this product under temperature <u>inversion conditions</u> (spraying in or above the inversion layer) and/or <u>high humidity conditions</u> (relative humidity 80 % and above) may lead to the following:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - damage to other sensitive crops and/or non-target areas through the movement of the suspended spray cloud away from the target field.
- Ensure that the fields are accurately marked and that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements will be met, and that relevant data will be compiled in a spray log and kept for future reference.

PENTIUM 960 EC PAGE 5 OF 34

Pre-emergence aerial application of broad leaf crops:

- <u>Volume</u>: A spray mixture volume of 30 to 40 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- <u>Droplet coverage</u>: Droplet coverage of 20 to 30 droplets per cm² must be recovered at the target.
- <u>Droplet size</u>: A droplet spectrum with a VMD of 350 to 400 micron is recommended. Ensure that the production of fine droplets (less than 150 micron with high drift & evaporation potential) is restricted to a minimum.

APPLICATION RATES

Refer to "USE RESTRICTIONS" and "DIRECTIONS FOR USE" above.

1.1. <u>GROUNDNUTS</u>, <u>DRY BEANS</u>, <u>KIDNEYBEANS</u>, <u>SUNFLOWERS</u>, <u>COTTON</u>, <u>SOYBEANS AND LUPINS</u>

NOTE

• The higher application rates of **PENTIUM 960 EC** are recommended for control of Yellow nutsedge (*Cyperus esculentus*) and Crabfinger-grass (*Digitaria sanguinalis*) and on soils with > 1.0 % organic matter.

Table 1.1: PENTIUM 960 EC recommendations for use in broadleaf crops:

Soil Type	% Clay	PENTIUM 960 EC ε/ha
Sand / loamy sand / sandy loam	0 to 20	0.6 to 0.8
Sandy clay loam	21 to 30	0.8 to 1.0
Sandy clay loam / sandy clay	> 30 %	1.0 to 1.3

1.2. **GROUNDNUTS**

Table 1.2: PENTIUM 960 EC plus Sundry 500 WP recommendations for use in Groundnuts:

Soil Type % Clay	Dosage per hectare	Remarks	
11 to >30	0.65 to 1.0 ℓ PENTIUM 960 EC PLUS 70 to 80 g Sundry 500 WP	Apply at planting, or within 48 hours at Use the lower dosage rates on more rates on heavier soils as indicated ab Sundry 500 WP may adversely affect certain climatic conditions. In certain quality may be affected adversely include wet conditions (>20 mm combination with cold temperatures, clay) and/or overcast weather within However, the exact parameters contained between farms and fields and cultive using this product, the user is the accepts risk of crop injury. Refer to the Sundry 500 WP is PRECAUTIONS , USE RESTRICTIO FOR USE .	sandy soils and higher ove. It groundnuts or under in scenarios yield and y. These conditions rain), especially in sandy soils (< 10 % 28 days after planting. ausing such damage ue to yearly variation var susceptibility. By refore warned that he abel for WARNINGS,
Re-croppi	ing intervals:	·	
Groundnuts and Soybeans		14 days	
All other	All other crops		4 months

PENTIUM 960 EC PAGE 6 OF 34

1.3. SOYBEANS

Table 1.3: PENTIUM 960 EC Plus Sundry 500 WP recommendations for use in Soybeans:

Soil Type % Clay	Dosage per hectare	Remarks	
11 to >30	0.65 to 1.0 \(\epsilon\) PENTIUM 960 EC PLUS 80 to 100 g Sundry 500 WP	Apply at planting, or within 48 hours at Use the lower dosage rates on more rates on heavier soils as indicated ab <u>Seed size</u> : Smaller sized seed may be herbicide damage than larger seeds. Apply the PENTIUM 960 EC plus Supre-emergence on groundnuts or so prior to planting or at planting, or imm Do not apply later than 48 hours after adhered to this, the risk of crop injust the residual efficacy and thus complanting row may be compromised. 500 WP label for WARNINGS , RESTRICTIONS and DIRECTIONS	sandy soils and higher ove. De more susceptible to sundry 500 WP mixture ybeans either 14 days nediately after planting. Der planting the crop. If any will be reduced but not of weeds in the Refer to the Sundry PRECAUTIONS, USE
Re-cropp	ing intervals:		
Groundnuts and Soybeans			14 days
All other crops			4 months

<u>Table 1.4:</u> Weeds normally controlled in Groundnuts and Soybeans with a tank mixture of PENTIUM 960 EC Plus 80 g Sundry 500 WP per hectare:

960 EC Plus 60 g Sundry 500 WP per nectare:					
Annual grasses:					
Eleusine indica Goose grass					
	Broadleaved weeds:				
Amaranthus hybridus	Common pigweed				
Chenopodium album White goosefoot					
Chenopodium carinatum Green goosefoot					
Crotalaria sphaerocarpa Mealie Crotalaria					
Schkuhria pinnata Dwarf marigold					
Tribulus terrestris	Devil's thorn				
Weeds controlled variably:					
Datura ferox Large thorn apple					
Tagetes minuta Khakiweed					

PENTIUM 960 EC PAGE 7 OF 34

<u>Table 1.5:</u> Weeds normally controlled in Groundnuts and Soybeans with a tank mixture of PENTIUM 960 EC Plus 100 g Sundry 500 WP per hectare:

960 EC Plus 100 g Sundry 500 WP per nectare:					
Annual grasses:					
Brachiaria eruciformis	Sweet signal grass				
Chloris virgate	Feathertop Chloris				
Digitaria sanguinalis	Crab finger grass				
Echinochloa crusgalli	Barnyard grass				
Eleusine indica	Goose grass				
Panicum maximum	Common buffalo grass				
Panicum schinzii	Sweet buffalo grass				
Setaria pumila (=pallide-fusca)	Red bristle grass				
Setaria verticillata	Sticky bristle grass				
Tragus racemosus	Large carrot seed grass				
Urochloa panicoides	Herringbone grass				
Broadlea	aved weeds:				
Amaranthus deflexus	Perennial pigweed				
Amaranthus hybridus	Common pigweed				
Amaranthus spinosus	Thorny pigweed				
Amaranthus thunbergii	Red pigweed				
Chenopodium album	White goosefoot				
Chenopodium carinatum	Green goosefoot				
Cleome menophylla	Spindlepod				
Crotalaria sphaerocarpa	Mielie Crotalaria				
Flaveria bidentis	Smelter's bush				
Portulaca oleraceae	Purslane				
Schkuhria pinnata	Dwarf marigold				
Tribulus terrestris	Devil's thorn				
Weeds conf	rolled variably:				
Anthemis cotula	Stink mayweed				
Bidens pilosa	Common blackjack				
Commelina benghalensis	Bengal wandering jew				
Cosmos bipinnatus	Cosmos				
Datura ferox	Large thorn apple				
Datura stamonium	Common thorn apple				
Stellaria media	Chickweed				
Tagetes minuta	Khakiweed				
Xanthium strumarium	Cocklebur				

NOTE

As **Sundry 500 WP** controls annual broadleaved weeds, other broadleaved weed species not listed above may be controlled to a greater or lesser extent. The registration holder however does not accept any liability in respect of the control of unlisted weeds.

PENTIUM 960 EC PAGE 8 OF 34

1.6 <u>Pre-emergence application of PENTIUM 960 EC in a tank mixture with Metricane 700 WDG or Metribuzin 480 SC in soybeans.</u>

NOTES

- Certain soybean cultivars may be sensitive to Metricane 700 WDG and Metribuzin 480 SC such as
 Edgar, Dumela, Ibis, Highveld Top and Komati. DO NOT use this tank mixtures on these cultivars or
 on cultivars that is used for multiplication of mother seeds or cultivars on which Metricane 700 WDG
 and Metribuzin 480 SC has not been tested. Please consult your seed supplier before application.
- Metricane 700 WDG and Metribuzin 480 SC should not be applied in soils with a pH higher than 7 or lower than 4.5, in soils that is deficient of minerals or in soils that is flooded as crop injury may occur.
- **DO NOT** apply tank mixture in soils containing less than 10 % or more than 35 % clay.
- Please refer to the Metricane 700 WDG or Metribuzin 480 SC label for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS			
780 to 1000 mℓ / ha	Metricane 700 WDG 92 g / ha OR		Metribuzin 480 SC 300 to 400 mℓ / ha*	
	WEEDS CONT	ROLLED		
Botanical name			Comm	on name
Amaranthus hybridus	C	ommon pigw	eed	
Citrullus lanatus	W	ild watermel	on	
Datura ferox	La	arge thorn ap	ple	
Datura stramonium	C	ommon thorn	apple	
Digitaria sanguinalis	С	Crab fingergrass		
Eleusine indica	G	Goose grass		
Eleusine coracana		Goose grass		
Panicum leavifolium	S	weet buffalo	grass	
Panicum shinzii	S	weet buffalo	grass	
Portulaca oleracea	Pi	urslane		
Tagetes minuta	Ta	all Khaki wee	d	
Urochloa panicoides	Aı	nnual signalg	rass	
Re-cropping intervals:				
Maize, Carrots, Tomatoes, Beetroot, Asparagus and Soybeans			6 months	
Cruciferae, Cucurbits, Peas, Beans, Wheat, Onions, Lettuce, Tobacco and Strawberries			12 months	

Metribuzin 480 SC - * 300 ml / ha = 11 to 20 % clay; 400 ml / ha = 21 to 35 % clay.

2. SUNFLOWERS

NOTES

 Please refer to the Radical 250 EC label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

Table 2: PENTIUM 960 EC plus Radical 250 EC recommendations for use in Sunflowers:

Soil Type & % Clay	PENTIUM 960 EC ℓ/ha	Radical 250 EC ℓ/ha		
5 to 20	0.6 to 0.8	1.0		
> 20	0.8 to 1.3	1.25		

REMARKS

Do not use Radical 250 EC:

- in seed, birdseed or confectionary type sunflowers.
- on sunflowers which have been planted in very shallow soil.

PENTIUM 960 EC PAGE 9 OF 34

3. POTATOES

NOTES

• Pre-emergence in respect of weeds:

Apply 1.2 litres per hectare, under dry land conditions, pre-emergence of both potatoes and weeds, after the first summer rains.

4. MAIZE

4.1 Post-emergence application of PENTIUM 960 EC in a tank mixture with Terbucide Plus 900 WDG that can be used after a pre-emergence application of Pentium Plus 915 EC in a tank mixture with Terbucide Plus 900 WDG as in the table below.

NOTES

- Apply at least 150 litres water per hectare during the pre-emergence application and 200 litres water per hectare during the post-emergence application.
- The lower rates should be used on sandy soils and the higher rates on loamy / sandy clay soil.
- Please refer to Terbucide Plus 900 WDG and Pentium Plus 915 EC labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PRE-EMERGENCE APPLICATION					
Pentium Plus 915 EC 700 to 900 mℓ / ha	PLUS			de Plus 900 WDG 300 g / ha	
	FOLLOW	ED BY			
POS	T-EMERGENCE	APPLICA	ATION		
PENTIUM 960 EC 400 to 500 mℓ / ha			4	cide Plus 900 WDG 400 g / ha	
	WEEDS CON	rolled			
Botanical name			Commor	n name	
Acanthospermum hispidum		Upright sta			
Citrullus lanatus		Wild water			
Crotalaria sphaerocarpa		Mealie cro			
Cyperus esculentus* Datura ferox		Yellow nutsedge Large thorn apple			
		Crab fingergrass			
Digitaria sanguinalis		Goose grass			
Eleusine indica			morning glory		
Ipomoea purpurea Panicum schinzii (= laevifolium)			falo grass		
Portulaca oleracea		Purslane	idio graco		
Schkuhria pinnata		Dwarf mar	riaold		
'		Tall Khaki	<u> </u>		
Tribulus terrestris* Dubbeltjie					
Re-cropping intervals: The listed re-cropping intervals are valid only if the correct dosage rate of Terbucide Plus 900 WDG (Atrazine + Terbuthylazine) according to soil type was applied and normal or above average rainfall occurred, after application.					
Grain sorghum		6 months			
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains			18 months		
Other crops not listed			24 months		
Maize & Sugarcane				None	

^{*} Variable control of these weeds.

PENTIUM 960 EC PAGE 10 OF 34

4.2 <u>Post-emergence application of PENTIUM 960 EC in a tank mixture with Terbusien Super 600 SC or Terbucide Plus 900 WDG and Lumen 420 EC.</u>

NOTES

- Apply post-emergence after the crop has emerged when the weeds are between the 4 to 6 leaf stage.
- At plant It is recommended to follow a pre-emergence herbicide programme.
- Ensure total coverage of the weed foliage.
- Do not apply **Lumen 420 SC** when maize or weeds are under stress (cold, drought, etc.).
- Lumen 420 SC may cause chlorosis of maize leaves. These symptoms are of a transitory nature and yield will not be affected.
- Do not apply Lumen 420 SC when maize or weeds are under stress (cold, drought, etc.).
- Apply in at least 200 litres water per hectare, ensuring thorough coverage.
- Refer to the Terbucide Plus 900 WDG and Lumen 420 EC labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

	0	R		PLUS	PLUS	PLUS	
PENTIUM 960 EC 510 mℓ / ha	Terbucide Plus 900 WDG 540 g / ha	Terbusien Super 600 SC 800 mt / ha	Lumen 420 SC 180 mℓ / ha		Destinaire® 1 %	Interlock® 0.3 %	
		WEE	DS CC	ONTROLLE	D		
	Botanical nam	ne			Common nam	е	
Acanthospermum	hispidum			Upright starbur			
Amaranthus hybri	idus			Common			
Argemone ochrole	euca			White flov	vered Mexican poppy		
Bidens pilosa				Common	blackjack		
Chenopodium alb				White goo			
Cleome monophy				Spindlepo			
Commelina bengl	halensis				andering Jew		
Crotalaria sphaer	ocarpa			Mealie Cr			
Cyperus esculent				Yellow nu	tsedge		
Dactylotenium ae	gypticum			Crowfoot			
Datura ferox				Large tho			
Datura stramoniu				Thorn apple			
Digitaria sanguina				Crab fingergrass			
Dysphania x bont				<u> </u>			
Echinochloa color	na			Marsh gra			
Eleusine coracan	а			Goose gra			
Eleusine indica				Goose gra			
Galinsoga parviflo					vered quickweed		
Ipomoea obscura					te morning glory		
Ipomoea purpurea				Morning g			
Nicandra physalo	ides			Apple of Peru			
Malva parviflora				Small mallow			
Panicum schinzii				Sweet buffalo grass			
Physalis angulate				Wild gooseberry			
Portulaca olerace				Purslane			
Richardia brachie				Mexican richardia			
	Schkuhria pinnata			Dwarf marigold			
Setaria pumila (= p	pallide-fusca)			Palmgrass			
Setaria pumila				Garden bristle grass			
Tagetes minuta				Tall Khaki weed			
Tribulus terrestris				Dubbeltjie			
Xanthium strumar				Cocklebu			
Re-cropping intervals: See above under 4.1.							

^{*} Variable control of these weeds.

PENTIUM 960 EC PAGE 11 OF 34

4.3 Post-emergence application of PENTIUM 960 EC plus Terbucide Plus 900 WDG plus Cantron® 480 SC, plus Villa 51 in maize for extended control of annual grass weeds.

NOTES

- Apply this post-emergence application as a follow up to a pre-emergence application of Terbucide
 Plus 900 WDG in a tank mixture with Pentium Plus 915 EC OR Metolachlor 915 EC OR
 Metolachlor 800 EC OR Premium 840 EC PLUS Cantron[®] 480 SC as indicated on the registered
 labels.
- Apply tank mixture post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- To improve control of larger broadleaf weeds, Morning glory and other problem weeds add 250 mℓ 2,4-D Amine 480 SL to the tank mixtures as listed below (DO NOT add any surfactant when 2,4-D Amine 480 SL is used in a tank mixture).
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to the Terbucide Plus 900 WDG and Cantron[®] 480 SC labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS	PLUS	PLUS	
410 to 510 mℓ / ha	Terbucide Plus 900 WDG	Cantron® 480 SC	Villa 51	
770 10 070 11107 110	540 g / ha	210 to 260 mℓ / ha	0.1%	
	WEEDS COI	NTROLLED		
	Above-ment	ioned plus:		
Bot	anical name	Commo	on name	
Amaranthus hybridus		Common pigweed		
Bidens bipinnata		Spanish blackjack		
Bidens pilosa		Blackjack		
Chloris virgata**		Feathertop Chloris		
Citrullus lanatus		Wild watermelon		
Cleome monophylla		Spindlepod		
Commelina benghale	nsis*	Benghal wandering Jew		
Crotalaria sphaeroca		Mealie crotalaria		
Cyperus esculentus*	*	Yellow nutsedge		
Datura ferox		Large thorn apple		
Datura stramonium		Thorn apple		
Digitaria sanguinalis		Crab fingergrass		
Eleusine indica		Goose grass		
Galinsoga parviflora		Gallant soldier		
Hibiscus cannabinus	**	Kenaf		
Hibiscus trionum		Bladder weed		
	WEEDS CO	_		
	Above-ment			
	anical name		on name	
Ipomoea purpurea		Common morning glory		
Tagetes minuta		Tall Khaki weed		
Tribulus terrestris**	**	Dubbeltjie		
Urochloa panicoides*		Herringbone grass		
Xanthium strumarium		Cocklebur		
Re-cropping intervals:				
See above under 4.1.				

^{*} Only at highest dosage rate. & ** Variable control of these weeds (up to 80 % suppression for a period of 8 weeks).

PENTIUM 960 EC PAGE 12 OF 34

4.4 Post-emergence application of PENTIUM 960 EC in a tank mixture with Terbucide Plus 900 WDG plus Cantron® Smart 500 SC plus Velocity® Super in GLYPHOSATE TOLERANT maize for control of annual broadleaf and grass weeds:

NOTES

- <u>IMPORTANT</u>: This recommended spray mixture can only be applied in genetically modified maize cultivars that are certified as being tolerant to the herbicide active ingredient Glyphosate.
- Apply this post-emergence application as a follow up to a pre-emergence application of Terbucide
 Plus 900 WDG in a tank mixture with Pentium Plus 915 EC OR Metolachlor 915 EC OR
 Metolachlor 800 EC OR Premium 840 EC PLUS Cantron® Smart 480 SC as indicated on the
 registered labels.
- Apply tank mixture post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- To improve control of larger broadleaf weeds, Morning glory and other problem weeds add 250 mℓ 2,4-D Amine 480 SL to the tank mixtures as listed below (DO NOT add any surfactant when 2,4-D Amine 480 SL is used in a tank mixture).
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to the Cantron® Smart 500 SC and Terbucide Plus 900 WDG labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

	PLUS	PLUS	PLUS		
PENTIUM 960 EC 410 to 500 mℓ / ha	Terbucide Plus 900 WDG 500 g / ha	Cantron [®] Smart 500 SC 2.5 ℓ / ha	Velocity® Super 2 % OR Velocity® DryMax 1 % OR Class Act® NG 1 to 2 %		
		CONTROLLED mentioned plus:			
Rotanie	cal name	Common	name		
Amaranthus hybridus	our nume	Common pigweed	Hullie		
Bidens bipinnata		Spanish blackjack			
Bidens pilosa		Blackjack			
Chenopodium album		White goosefoot			
Chloris virgata**		Feathertop Chloris			
Citrullus lanatus		Wild watermelon			
Cleome monophylla		Spindlepod			
Commelina benghalen	sis*	Benghal wandering Jew			
Crotalaria sphaerocarp	pa	Mealie crotalaria			
Cyperus esculentus**		Yellow nutsedge			
Datura ferox		Large thorn apple			
Datura stramonium		Thorn apple			
Digitaria sanguinalis		Crab fingergrass			
Eleusine indica		Goose grass			
Galinsoga parviflora		Gallant soldier			
Hibiscus cannabinus**		Kenaf			
Hibiscus trionum		Bladder weed			
Ipomoea purpurea		Common morning glory			
Panicum schinzii (= lae	evitolium)	Sweet buffalo grass			
Portulaca oleracea		Purslane			
Richardia brasiliensis		Mexican richardia			
Tagetes minuta		Tall Khaki weed			
Tribulus terrestris**		Dubbeltjie			
Urochloa panicoides**	*	Herringbone grass			
Xanthium strumarium*		Cocklebur			

PENTIUM 960 EC PAGE 13 OF 34

Re-cropping intervals:

See above under 4.1.

4.5 Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Terbusien Super 600 SC plus Villa 51 in maize for extended control of annual grass weeds:

NOTES

- Apply this post-emergence application as a follow up to a pre-emergence application of Cantron[®]
 480 SC in a tank mixture with Pentium Plus 915 EC OR Metolachlor 915 EC as indicated on the
 registered labels.
- To improve control of larger broadleaf weeds, Morning glory and other problem weeds add 250 m/2
 2,4-D Amine 480 SL to the tank mixtures as listed below (DO NOT add Villa 51 or any other surfactant when 2,4-D Amine 480 SL is used in a tank mixture).
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to the Terbusien Super 600 SC and Cantron® 480 SC labels for dosage rates and a list of additional weeds controlled by this product, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE

PENTIUM 960 EC	PLUS	PLUS	PLUS		
410 to 510 mℓ / ha	Cantron® 480 SC	Terbusien Super 600 SC	Villa 51		
770 10 070 11107 110	210 to 260 mℓ / ha	800 mℓ / ha	0.1 %		
	WEEDS CON	TROLLED			
	Above-mention	ned plus:			
Botan	ical name	Common na	ame		
Amaranthus hybridus		Common pigweed			
Bidens bipinnata		Spanish blackjack			
Bidens pilosa		Blackjack			
Chloris virgata**		Feathertop Chloris			
Citrullus lanatus		Wild watermelon			
Cleome monophylla		Spindlepod			
Commelina benghalensi	is*	Benghal wandering Jew			
Crotalaria sphaerocarpa		Mealie crotalaria			
Cyperus esculentus**		Yellow nutsedge			
Datura ferox		Large thorn apple			
Datura stramonium		Thorn apple			
Digitaria sanguinalis		Crab fingergrass			
Eleusine indica		Goose grass			
Galinsoga parviflora		Gallant soldier			
Hibiscus cannabinus**		Kenaf			
Hibiscus trionum		Bladder weed			
Ipomoea purpurea		Common morning glory			
Tagetes minuta		Tall Khaki weed			
Tribulus terrestris**		Dubbeltjie			
Urochloa panicoides**		Herringbone grass			
Xanthium strumarium** Cocklebur					
Re-cropping intervals:					
See above under 4.1.	See above under 4.1.				

^{*} Only at highest dosage rate.

PENTIUM 960 EC PAGE 14 OF 34

^{*} Only at highest dosage rate.

^{**} Variable control of these weeds (up to 80 % suppression for a period of 8 weeks).

^{**} Variable control of these weeds (up to 80 % suppression for a period of 8 weeks).

4.6 <u>Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Gatling 700 SC in maize for extended control of annual grass and broadleaf weeds:</u>

NOTES

- Apply this post-emergence application as a follow up to a pre-emergence application of Cantron[®] 480 SC in a tank mixture with Pentium Plus 915 EC or Metolachlor 915 EC as indicated on the registered labels.
- To improve control of larger broadleaf weeds, Morning glory and other problem weeds add 250 mℓ 2,4-D Amine 480 SL to the tank mixtures as listed below (do not add Villa 51 or any other surfactant when 2,4-D Amine 480 SL is used in a tank mixture).
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Higher dosage rates of Gatling 700 SC may be applied for control of additional broadleaf weed species and longer residual control of broadleaf weeds. Refer to the Gatling 700 SC label for dosage rates according to soil profile, and a list of additional weeds controlled by this product, as well as for USE RESTRICTIONS and DIRECTIONS FOR USE.
- Refer to the Cantron[®] 480 SC and Gatling 700 SC labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS	PLUS	PLUS	
410 mt / ha	Cantron [®] 480 SC 210 to 260 mt / ha	Gatling 700 SC 1.0 t / ha	Villa 51 0.1 %	
	WEEDS CONT	ROLLED		
Botanical name		Common nar	ne	
Amaranthus hybridus		mmon pigweed		
Chenopodium album	Wh	ite goosefoot		
Commelina benghalensis*	Ber	ngal wandering jew		
Eleusine indica	God	ose grass		
Portulaca oleracea	Pur	Purslane		
Tribulus terrestris	Duk	Dubbeltjie		
Urochloa panicoides	Gai	rden Urochloa		
Re-cropping intervals:				
Grain sorghum			12 months	
Sunflowers, Groundnuts, So sorghum and Small grains	oybeans, Potatoes,	Dry beans, Forage	18 months	
Other crops not listed			24 months	
Maize & Sugarcane			None	

^{*} Only at highest dosage rate.

4.7 <u>Post-emergence application of PENTIUM 960 EC in a tank mixture with Cantron® 480 SC, Terbusien Super 600 SC and Villa 51 that can be used after a pre-emergence application of Cantron® 480 SC and Pentium Plus 915 EC.</u>

NOTES

- Apply this post-emergence application as a follow-up to a pre-emergence application of Cantron[®] 480
 SC in a tank mixture with Pentium Plus 915 EC.
- Apply at least 150 litres water per hectare during the pre-emergence application and 200 litres water per hectare during the post-emergence application.
- Refer to the Cantron[®] 480 SC, Terbusien Super 600 SC and Pentium Plus 915 EC labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC PAGE 15 OF 34

	PRE-EMERGENCE APPLICATION							
PENTIUM PLUS 9 650 mℓ / ha	15 EC	PLUS	DITIE		on [®] 480 SC 0 mε/ ha PLUS		Interlock [®] 250 to 350 mℓ / ha	
FOLLOWED BY								
POST-EMERGENCE APPLICATION								
PENTIUM 960 EC 650 mℓ / ha	PLUS	Terbusien 600 S 800 ml	SC	PLUS	Cantron® 480 SC		PLUS	Villa 51 0.1 %
		= = :	EEDS CON					
			ove-ment	ioned pl	us:			
	Botanica	ıl name				Common	name	
Amaranthus hybrid	us			Common pigweed				
Citrullus lanatus				Wild watermelon				
Commelina bengha				Benghal wandering jew				
Convolvulus arvens				Field bindweed				
Crotalaria sphaero				Mealie crotalaria Yellow nutsedge				
Cyperus esculentus	s**							
Datura ferox				Large thorn apple				
Digitaria sanguinali	is			Crab fingergrass				
Eleusine coracana				Goose grass				
Ipomoea purpurea				Common morning glory				
Portulaca oleracea				Purslane				
Setaria verticillata			Bur bristle grass					
Tagetes minuta			Tall Khaki weed					
	Xanthium strumarium				ebur			
Re-cropping inter								

4.8 Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Terbucide 600 WDG plus Villa 51 in maize:

NOTES

This treatment can be applied as a post-emergence application or as a follow up to a pre-emergence application of Cantron[®] 480 SC in tank mixture with Pentium Plus 915 EC OR Metolachlor 915 EC as indicated on the registered labels.

 Refer to the Terbucide 600 WDG labels for list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS	PLUS	PLUS	
260 to 520 mℓ / ha	Terbucide 600 WDG 800 g / ha	Cantron[®] 480 SC 210 to 260 mℓ / ha	Villa 51 0.1 %	
	NTROLLED			
Bota	anical name	Common name		
Acanthosperpum hisp		Upright starbur		
Amaranthus hybridus	;	Common pigweed		
Bidens pilosa		Common blackjack		
Chenopodium album	podium album White goosefoot			
Commelina benghale	nsis*	Wandering jew		
Cyperus esculentus*		Yellow nutsedge		
Datura ferox		Large thorn apple		
Galinsoga parviflora		Gallant soldier		
Portulaca oleracea		Purslane		
Richardia brasiliensis	;	Mexican Richardia		
Tagetes minuta		Tall Khaki weed		
Xanthium strumarium)*	Cocklebur		
Re-cropping interva	ls:			
See above under 4.1.				
0 1 11:1 11				

^{*} Only at highest dosage rate.

PENTIUM 960 EC PAGE 16 OF 34

4.9 Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Crown 750 WDG plus Terbucide 600 WDG or Terbusien Super 600 SC plus Villa 51 or Summit Super for the control of Yellow and Purple nutsedge and certain broadleaf weeds in maize

NOTE

- Apply this post-emergence application as a follow up to a pre-emergence application of Cantron[®]
 480 SC in tank mixture with Pentium Plus 915 EC OR Metolachlor 915 EC as indicated on the registered labels.
- For optimum control of Nutsedge, apply Cantron® 480 SC plus Crown 750 WDG plus Terbucide 600 WDG or Terbusien Super 600 SC on actively growing Nutsedge under moist conditions, 3 to 5 weeks after planting. Ensure that the application is made after the majority of the Nutsedges have germinated but before flowering. New germination of Nutsedge may occur if application was performed too early. Later applications, when the Nutsedge is in flower, will also give sub-optimal results.
- Refer to the Crown 750 WDG, Terbucide 600 WDG or Terbusien Super 600 SC labels for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

	PLUS	PLUS	PLUS	PLUS
		Terbucide 600 WDG		Villa 51
PENTIUM 960 EC	Crown 750	800 g / ha	Cantron [®] 480	0.1 %
260 to 520 mℓ / ha	WDG	OR	SC	OR
	50 g / ha	Terbusien Super 600 SC	260 mℓ / ha	Summit Super
		800 mℓ / ha		0.15 % to 0.3 %

WEEDS CONTROLLED THE FOLLOWING WEEDS ARE NORMALLY CONTROLLED AT THE DOSAGE RATE AS INDICATED ABOVE:

Botanical name	Common name
Acanthospermum hispidum	Upright starbur
Amaranthus hybridus	Common pigweed
Amaranthus spinosus	Thorny pigweed
Bidens pilosa	Common blackjack
Cleome monophylla	Single leaved cleome
Chenopodium album	White goosefoot
Chenopodium carinatum	Green goosefoot
Commelina benghalensis*	Wandering Jew
Cyperus esculentus*	Yellow nutsedge
Cyperus rotundus*	Purple nutsedge
Datura ferox	Large thorn apple
Galinsoga parviflora	Gallant soldier
Ipomoea purpurea	Common morning glory
Ipomoea hederacea	Ivy-leaved morning glory
Portulaca oleracea	Purslane
Richardia brasiliensis	Tropical Richardia
Schkuhria pinnata	Dwarf marigold
Portulaca oleracea	Purslane
Richardia brasiliensis	Tropical Richardia
Tagetes minuta	Tall Khaki weed
Xanthium strumarium*	Cocklebur

Re-cropping intervals:

The listed re-cropping intervals are valid only if the correct dosage rate of **Terbucide 600 WDG OR Terbusien Super 600 SC (Atrazine + Terbuthylazine**) according to soil type was applied and normal or above average rainfall occurred, after application.

Grain sorghum	12 months
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains	18 months
Other crops not listed	24 months
Maize	1 month

^{*} Only at highest dosage rate.

PENTIUM 960 EC PAGE 17 OF 34

4.10 Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Bromoxynil 225 EC plus Terbucide 600 WDG or Terbusien Super 600 SC in maize.

NOTES

- This treatment can be applied as a post-emergence application or as a follow up to a pre-emergence application of Cantron[®] 480 SC in tank mixture with Pentium Plus 915 EC OR Metolachlor 800 EC or Metolachlor 915 EC or as indicated on the registered labels.
- Do not add Villa 51 or any other wetting agent to any mixture containing Bromoxynil 225 EC as this
 may cause damage to the crop.
- Refer to the Bromoxynil 225 EC and Terbusien Super 600 SC or Terbucide 600 WDG labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

	PLUS	PI	LUS		PL	.US
PENTIUM 960 EC 400 to 520 mℓ / ha	Cantron[®] 480 SC 210 to 260 mℓ / ha		Bromoxynil 225 EC 500 mℓ / ha		600 na	OR Terbusien Super 600 SC 800 mℓ / ha
	WE	EDS CONT	ROLLED:			
	Botanical name			Commo	on nan	ne
Acanthosperpum his			Upright star			
Amaranthus hybridu	S		Common pi			
Bidens pilosa			Common bl	ackjack		
Chenopodium album	1		White goose	efoot		
Commelina benghal	ensis*		Wandering	jew		
Cyperus esculentus [*]	*		Yellow nuts	edge		
Digitaria sanguinalis			Crab finger	grass		
Datura ferox			Large thorn apple			
Eleusine indica (afric	cana)		Goose grass			
Galinsoga parviflora			Gallant soldier			
Emex australis**			Spiny Emex			
Richardia brasiliensi	s		Mexican Richardia			
Tagetes minuta			Tall Khaki w			
Urochloa panicoides				e grass / gard	den urd	ochloa
Xanthium strumarium			Cocklebur*			
The listed re-croppi Terbusien Super 6	Re-cropping intervals: The listed re-cropping intervals are valid only if the correct dosage rate of Terbucide 600 WDG OR Terbusien Super 600 SC (Atrazine + Terbuthylazine) according to soil type was applied and normal or above average rainfall occurred, after application.					
Grain sorghum					6 months	
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry bea sorghum and Small grains			Dry beans	, Forage		18 months
Other crops not listed				24 months		

^{*} Only at highest dosage rate.

PENTIUM 960 EC PAGE 18 OF 34

^{**} Emex australis needs 750 mℓ Bromoxynil 225 EC to be controlled.

4.11 Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Slash Plus 540 SL plus Terbucide 600 WDG plus in *GLYPHOSATE TOLERANT* maize cultivars:

NOTES

- <u>IMPORTANT:</u> This tank mixture of **PENTIUM 960 EC plus Cantron**® **480 SC** plus **Slash Plus 540** plus **Terbucide 600 WDG** may only be applied on certified maize cultivars containing *GLYPHOSATE TOLERANT* genetic material.
- This treatment can be applied as a stand-alone post-emergence application or as a follow up to a
 pre-emergence application of Cantron[®] 480 SC in tank mixture with Pentium Plus 915 EC OR
 Metolachlor 915 EC, as indicated on the registered labels.
- Use the higher dosage rate for more difficult weeds or higher weed pressure situations. Apply to young actively growing weeds.
- Refer to the Slash Plus 540 SL and Terbucide 600 WDG labels for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS		PLUS		PLUS
330 to 490 mℓ / ha	Slash Plus 540 SL	Terbu	cide 600 WDG	C	Cantron [®] 480 SC
330 to 490 Hk / Ha	1300 to 1700 mℓ / ha	8	300 g / ha	2	10 to 260 mℓ / ha
	WEED	S CONTI	ROLLED	•	
E	Botanical name			Commo	n name
Acanthospermum hi	spidium		Upright starbur		
Amaranthus hybridu	S		Common pigwe	ed	
Amaranthus spinosu	IS		Thorny pigweed		
Bidens pilosa			Common blackj	ack	
Chenopodium albun	า		White goosefoo	t	
Chenopodium carina	atum		Green goosefoo	ot	
Commelina benghal			Bengal wanderi	ng Jew	
Cyperus esculentus	*		Yellow nutsedge	е	
Datura ferox			Large thorn apple		
Digitaria sanguinalis	(adscendens)		Crab finger grass		
Eleusine indica			Goose grass		
Galinsoga parviflora			Gallant soldier		
Ipomoea obscura			Wild Petunia		
Portulaca oleracea			Purslane		
Richardia brasiliensi	s		Mexican richardia		
Tagetes minuta			Tall Khaki weed		
Xanthium strumariur			Cocklebur		
Re-cropping intervals: The listed re-cropping intervals are valid only if the correct dosage rate of Terbucide 600 WDG Terbuthylazine) according to soil type was applied and normal or above average rainfall occurred, after application.					
Grain sorghum					18 months
Sunflowers, Groundnuts, Soybeans, Potatoes, sorghum and Small grains			Dry beans, F	Forage	12 months
Other crops not listed				24 months	

^{*} Only at highest dosage rate.

PENTIUM 960 EC PAGE 19 OF 34

4.12 <u>Post-emergence applications of PENTIUM 960 EC that can be used after a pre-emergence application of Pentium Plus 915 EC.</u>

NOTES

- Use the higher application rates of **Pentium Plus 915 EC** for improved control of *Cyperus esculentus* (Yellow nutsedge), or for improved control of heavy infestations of *Digitaria sanguinalis* (Crabfinger-grass), or where **Pentium Plus 915 EC** is pre-plant incorporated, or where organic matter in the soil exceeds 1.0 %.
- Apply **PENTIUM 960 EC** in a tank mixture with **Terbusien Super 600 SC** early post-emergence, after the first cultivation.
- Early post-emergence treatments give more effective broadleaf weed control on soils with > 30 % clav.
- Under adverse weather conditions or with poor initial control, on soils with 31 to 40 % and 41 to 50 % clay, the application rates of Terbusien Super 600 SC can be increased to 4.0 and 5.0 litres per hectare, respectively.
- If Triazine sensitive crops such as groundnuts, kidney beans, cotton, dry beans, soybeans, sunflowers, wheat, vegetables, cotton and tobacco are planted as follow-up crops, the application rates of Agrizine 500 SC and Terbusien Super 600 SC should not exceed 2.0 litres per hectare. These low rates may still damage follow-up crops on the very sandy soils of the North-Western Free State or on calcareous soils and weed control may not always be satisfactory.
- If heavy rain occurs on light, sandy soils (< 15 % clay and < 0.5 % organic matter) poor weed control may result and a split application is preferred.
- Use a suitable penetrant with all post-emergence applications, with the exception of mixtures containing **2,4-D Amine 480 SL**.
- Consult the Terbusien Super 600 SC, Agrizine 500 SC and 2,4-D Amine 480 SL labels for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

		PRE-EMERGENCE	POST-EM	ERGENCE
Soil Type	% Clay	Pentium Plus 915 EC	PENTIUM 960 EC	PLUS Terbusien Super 600 SC ℓ/ ha
Sand	0 to 10	0.4 to 0.5	0.3	2.2
Loamy sand / sandy loam	11 to 20	0.5 to 0.7	0.3	2.5
Sandy clay loam	21 to 30	0.7 to 0.8	0.35	3.0
Sandy clay loam / sandy clay	31 to 40	0.8 to 0.9	0.35 to 0.5	3.0
Sandy clay / turf	41 to 50	0.9 to 1.0	0.35 to 0.5	3.0

Re-cropping intervals:

The listed re-cropping intervals are valid only if the correct dosage rate of **Terbusien Super 600 SC** (**Atrazine + Terbuthylazine**) according to soil type was applied and normal or above average rainfall occurred, after application.

Grain sorghum	6 months
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains	18 months
Other crops not listed	24 months

PENTIUM 960 EC PAGE 20 of 34

4.13 PENTIUM 960 EC plus Terbusien Super 600 SC preceded by EPTC 720 EC (L 4859). NOTES

- Apply EPTC 720 EC at normal recommended rates on soils up to 30 % clay and follow up early postemergence with a tank mixture containing PENTIUM 960 EC and Terbusien Super 600 SC.
- Refer to the Terbusien Super 600 SC and EPTC 720 EC WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

Soil Type	% Clay	PENTIUM 960 EC ℓ/ha	PLUS Terbusien Super 600 SC t/ha
Sand	0 to 10	0.6	2.2
Loamy sand / sandy loam	11 to 20	0.8	2.5
Sandy clay loam	21 to 30	0.9	3.0

Re-cropping intervals:

The listed re-cropping intervals are valid only if the correct dosage rate of **Terbusien Super 600 SC** (**Atrazine + Terbuthylazine**) according to soil type was applied and normal or above average rainfall occurred, after application.

Grain sorghum	6 months
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains	18 months
Other crops not listed	24 months
Maize & Sugarcane	None

4.14 <u>Post-emergence application of PENTIUM 960 EC in a tank mixture with Terbusien Super 600 SC preceded by Pentium Ultra 660 SC.</u>

NOTES

- Pentium Ultra 660 SC can only be applied post-emergence if broadleaf weeds have not developed beyond the 4-leaf stage and grasses have not yet emerged. Where grasses have already emerged and broadleaf weeds have developed beyond the 4-leaf stage, these weeds must first be destroyed by cultivation and Pentium Ultra 660 SC then applied on to clean soil surface. When Pentium Ultra 660 SC is applied post-emergence to the weeds, a suitable surfactant, e.g., Villa 51, should be added to the spray mixture.
- In the Northwest Province and North-western Free State, on 11 to 20 % clay soils where the carry-over effect of **triazines** to groundnuts or other sensitive crops needs to be avoided, a maximum application rate of 2.7 litres per hectare **Pentium Ultra 660 SC** is recommended. On soils with high lime content these rates might however still damage follow-up crops.
- Refer to the Pentium Ultra 660 SC and Terbusien Super 600 SC labels for a list of additional weeds controlled by these products, as well as for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.
- **IMPORTANT**: Ensure that sufficient fertilizer is band-placed near the seed at planting to promote vigorous seedling growth.

Table 1: Pentium Ultra 660 SC applied pre-emergence.

Soil type	% Clay	Overall application ℓ / ha
Light sand / sand	0 to 10	1.25
Loamy sand / sandy loam	11 to 20	1.7
Sandy clay loam	21 to 35	2.1
Sandy clay	>35	2.5

PENTIUM 960 EC PAGE 21 OF 34

6 months

<u>Table 2:</u> Post emergence application of Terbusien Super 600 SC plus Pentium 960 EC for extended residual control of weeds after the initial pre-emergence application as listed in Table 1.

residual control of v	veeus after the ini		re-emergence application representation super 600 SC	Pentium 960 EC
Soil type	% Clay	rei	€ l ha	remaini 900 EC mℓ / ha
Light sand / sand	0 to 10		1.1	280
Loamy sand / sandy loam	11 to 20		1.3	380
Sandy clay loam	21 to 35		1.4	450
, ,		BY TAI	NK MIXTURE (Pre-emer	
			f weeds:	<u> </u>
Acanthospermum australe			Eight-seeded prostrate s	tarbur
Acanthospermum glabratum)		Five-seeded prostrate st	arbur
Acanthospermum hispidum			Upright starbur	
Amaranthus deflexus			Perennial pigweed	
Amaranthus hybridus			Common pigweed	
Amaranthus thunbergii			Red pigweed	
Bidens bipinnata			Spanish blackjack	
Bidens pilosa			Blackjack	
Chenopodium album			White goosefoot	
Chenopodium carinatum			Green goosefoot	
Cleome monophylla			Spindlepod	
Cleome rubella			Pretty lady	
*Commelina benghalensis			Bengal wandering Jew	
*Cosmos bipinnatus			Cosmos	
Crotalaria sphaerocarpa			Mealie Crotalaria	
*Datura ferox			Large thorn apple	
*Datura stramonium			Thorn apple	
Galinsoga parviflora			Gallant soldier	
Gisekia pharnaceoides			Gisekia	
Hibiscus trionum			Bladderweed	
Nicandra physaloides			Apple of Peru	
Physalis angulata			Wild gooseberry	
Portulaca oleracea			Purslane	
Richardia brasiliensis			Tropical Richardia	
Schkuhria pinnata			Dwarf marigold Khaki weed	
Tagetes minuta		Gras		
Brachiaria eruciformes			Sweet signal grass	
Chloris virgata			Feathertop Chloris	
Dactyloctenium aegyptium			Crowfoot	
Digitaria sanguinalis			Crab fingergrass	
Echinochloa crusgallii			Barnyard grass	
Eleusine indica			Goose grass	
Panicum maximum			Common buffalo grass	
Panicum schinzi			Sweet buffalo grass	
Setaria pumila (=pallide-fuso	ca)		Red bristle grass	
Setaria verticillata	<i>,</i>		Sticky bristle grass	
Sorghum bicolor			Common wild sorghum	
Tragus racemosus			Large carrotseed grass	
Urochloa panicoides			Herringbone grass	
	for a period of 7			nce application these wee
species may not be adequately controlled, especially on heavy soils:				
Under abnormal wet conditions late-season weed control may be inadequate.				
Re-cropping intervals:				
The listed re-cropping inter				
(Atrazine + Terbuthylazine	e) according to so	oil type	was applied and norma	al or above average rainfa
occurred after application				

PENTIUM 960 EC PAGE 22 OF 34

occurred, after application.

Grain sorghum

DI 110

Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, For sorghum and Small grains	age 18 months
Other crops not listed	24 months
Maize & Sugarcane	1 month

4.15 Post-emergence application of PENTIUM 960 EC plus Cantron® 480 SC plus Nicosulfuron 750 WDG plus Terbucide 600 WDG or Terbusien Super 600 SC plus Villa 51 for control of Sorghum species and certain broadleaf weeds in maize.

NOTES

- This treatment can be applied as a stand-alone post-emergence application or as a follow up to a
 pre-emergence application of Cantron[®] 480 SC in tank mixture with Pentium Plus 915 EC OR
 Metolachlor 915 EC as indicated on the registered labels.
- This mixture cannot be applied by means of aerial application.
- Apply with dropped nozzles (directed spray) in order to avoid spraying directly into plant funnel and to ensure that the weeds are not shielded from the spray by the crop's leaves.
- Adhere to all WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE as indicated on the Nicosulfuron 750 WDG, Terbucide 600 WDG or Terbusien Super 600 SC labels. Refer to these labels for additional weeds controlled.

PENTIUM 960	PLUS	PLUS	PLUS			
EC 260 to 520 m/	Nicosulfuron 750 WDG 60 g / ha	Terbucide 600 WDG 800 g / ha	OR Terbusien Super 600 SC 800 mℓ / ha	Cantron [®] 480 SC 260 mℓ / ha		
		PLUS 0.1 % Villa 5				
		WEEDS NORMALLY CO				
	From s	eedling (1 to 2 leaves) to		ed.		
Botan	ical name	Commor	n name	Maximum size of weeds at time of application		
		Grasses:				
Panicum schinz	ii	Sweet buffalo grass		Up to tillering stage		
Rottboellia coch	inchinensis	Guineafowl grass		Up to 4 leaves		
Setaria pumila (a (=pallide-fusca) Red bristle grass		Red bristle grass Up to 4 leave			
		Broadleaf wee	ds:			
Acanthospermum hispidum Upright starbur		6 leaf				
	anthus hybridus Common pigweed		4 leaves			
Amaranthus thunbergii Red pigweed		4 leaves				
Amaranthus deflexus Perennial pigweed		4 leaves				
Bidens pilosa		Common blackjack		6 leaf		
Cleome monoph			Spindlepod			
	Commelina benghalensis* Wandering Jew		6 leaf			
	Datura ferox Large thorn apple		3 leaves			
	Datura stramonium Thorn apple		4 leaves			
Galinsoga parvi			6 leaf			
Portulaca olerac		Purslane				6 leaf
Richardia brasili		Tropical Richardia				6 leaf
Schkuhria pinna	nta	Dwarf marigold		3 leaves 4 leaves		
Tagetes minuta			Tall khakiweed			
Tribulus terrestr		,		4 leaves		
Xanthium strum	arium*	Cocklebur		6 leaf		

PENTIUM 960 EC PAGE 23 OF 34

Sorghum species:			
Sorghum bicolor	Wild grain sorghum	Up to 7 leaves	
Sorghum halepense	Johnson grass	Up to 7 leaves	
Re-cropping intervals:			
The listed re-cropping intervals are valid only if the correct dosage rate of Terbucide 600 WDG and			
Terbusien Super 600 SC (Atrazine + Terbuthylazine) according to soil type was applied and normal or above average rainfall occurred, after application.			
Grain sorghum		12 months	
Sunflowers, Groundnuts, Sorghum and Small grains	oybeans, Potatoes, Dry beans, Forage	18 months	
Other crops not listed		24 months	

^{*} Only at highest dosage rate.

4.16 Post-emergence application of PENTIUM 960 EC plus Ortron 750 WDG plus Terbusien Super 600 SC plus Villa 51 in maize for extended control of annual grass weeds.

NOTES

- Apply this post-emergence application as a follow up to a pre-emergence application of Ortron 750 WDG in a tank mixture with Pentium Plus 915 EC, Metolachlor 915 EC OR Pentium Ultra 660 SC as indicated on the registered labels.
- Apply tank mixture post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to Ortron 750 WDG, Terbusien Super 600 SC and Villa 51 labels for additional weed species
 that can be controlled, as well as WARNINGS, PRECAUTIONS, USE RESTRICTIONS and
 DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS		
410 to 510 me / ha *	Ortron 750 WDG	Terbusien Super 600 SC	Villa 51
410 to 510 mil/ ma	165 g/ha	800 mℓ / ha	0.1 %
	WEEDS CON	ITROLLED	
	nical name	Common nam	е
Acanthospermum hispi	idum	Upright starbur	
Amaranthus hybridus		Common pigweed	
Brachiaria eruciformis		Sweet signal grass	
Chenopodium album		White goosefoot	
Chenopodium carinatu	m	Green goosefoot	
Cleome monophylla		Spindlepod	
Commelina benghalen	sis**	Benghal wandering Jew	
Cyperus esculentus***		Yellow nutsedge	
Digitaria sanguinalis		Crab fingergrass	
Datura ferox		Large thorn apple	
Echinocloa colona		Marsh grass	
Eleusine indica		Goose grass	
Eragrostis curvula		Weeping love grass	
Hibiscus cannabinus		Kenaf	
Hibiscus trionum		Bladder weed	
Nicandra physaloides		Apple-of-Peru	
Panicum schinzii		Sweet buffalo grass	
Physalis angulata		Wild gooseberry	
Polygonum aviculare		Prostrate knotweed	
Schkuhria pinnata		Dwarf Marigold	
Setaria pumila (=pallide	e-fusca)	Red bristle grass	
Setaria verticillata		Sticky bristle grass	·
Tagetes minuta		Tall Khaki weed	
Triumfetta pilosa		-	
Xanthium strumarium *	***	Cocklebur	

PENTIUM 960 EC PAGE 24 OF 34

Re-cropping intervals:		
The listed re-cropping intervals are valid only if the correct dosage rate of Terbusien Super 600 SC		
(Atrazine + Terbuthylazine) according to soil type was applied and normal or above average rainfall occurred, after application.		
Grain sorghum	6 months	
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains	18 months	
Other crops not listed	24 months	

^{*} Use the low rate on sandy soils and the higher rate on loamy / sandy clay soil.

4.17 <u>Post-emergence application of Pentium 960 EC, Ortron 750 WDG and Terbucide Plus 900 WDG, preceded by a pre-emergence application of Pentium Plus 915 EC, Ortron 750 WDG and Terbucide Plus 900 WDG in maize for control of various weeds.</u>

NOTES

- **Ortron 750 WDG** can be applied as part of a pre-emergence tank mixture application or as pre- and post-emergence tank mixture application.
- Apply the tank mixture post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to the Ortron 750 WDG, Pentium Plus 915 EC Terbucide Plus 900 WDG labels for a list of additional weeds controlled by these products, WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

Pentium Plus 915 EC 410 to 510 mt/ PLUS Ortron 750 WDG PLUS Terbucide Plus 900 WDG PLUS PLUS 1nterl 200 to 30			
165 g / ha 540 g / ha	lock® 00 mℓ / ha		
FOLLOWED BY			
POST-EMERGENCE APPLICATION			
570 to 650 mℓ / ha * PLUS 165 g / ha PLUS 540 g / ha PLUS	Villa 51 0.1 %		
WEEDS CONTROLLED			
Botanical name Common name			
	Upright starburst		
Amaranthus hybridus Common pigweed			
Bidens pilosa Common blackjack			
Commelina benghalensis Benghal wandering Jew			
Crotalaria sphaerocarpa Mealie crotalaria			
Cyperus esculentus** Yellow nutsedge			
Datura ferox Large thorn apple			
Datura stramonium** Common thorn apple			
	Crab fingergrass		
	Goose grass		
	Goose grass		
	Common morning glory Sweet buffalo grass		
Sweet building grass Setaria verticillata Sticky bristle grass			
Tagetes minuta Tall Khaki weed			
Tribulus terrestris Dubbeltjie / Devil's thorn			
Xanthium strumarium Cocklebur			

PENTIUM 960 EC PAGE 25 OF 34

^{**} Only at highest dosage rate.

^{***} Variable control of these weeds (up to 80 % suppression for a period of 8 weeks).

Re-cropping intervals:			
The listed re-cropping intervals are valid only if the correct dosage rate of Terbucide Plus 900 WDG			
(Atrazine + Terbuthylazine) according to soil type was applied and normal or above average rainfall			
occurred, after application.	_		
Grain sorghum	6 months		
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains	18 months		
Other crops not listed	24 months		

^{*} Use the low rate on sandy soils and the higher rate on loamy / sandy clay soil.

4.18 Post-emergence application of PENTIUM 960 EC plus Ortron 750 WDG plus Terbucide Plus 900 WDG plus Crown 750 WDG plus Villa 51 in maize for control of various weeds.

NOTES

- Apply the tank mixture post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3-leaf stage for grass weeds.
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to Ortron 750 WDG, Terbucide Plus 900 WDG, Crown 750 WDG and Villa 51 labels for a list of additional weeds controlled by these products, WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

	PLUS					
PENTIUM 960 EC 410 to 510 mℓ / ha *	Ortron 750 WDG 165 g / ha	Terbucide Plus 900 WDG 540 g / ha Crown 7: 50 g			Villa 51 0.1 %	
	W	EEDS CO	NTROLLED			
Botanical name		Common name				
Acanthospermum his	pidum		Upright starbur	st		
Amaranthus hybridus			Common pigwe	eed		
Cyperus esculentus*	*		Yellow nutsedo	je		
Datura stramonium**			Common thorn apple			
Ipomoea purpurea			Common morning glory			
Schkuhria pinnata			Dwarf Marigold			
Tagetes minuta**		Tall Khaki wee	d			
Xanthium strumarium **		Cocklebur				
Re-cropping intervals: The listed re-cropping intervals are valid only if the correct dosage rate of Terbucide Plus 900 WDG (Atrazine + Terbuthylazine) according to soil type was applied and normal or above average rainfall occurred, after application.						
Grain sorghum				6 m	onths	
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry sorghum and Small grains		s, Dry beans	Forage	18 r	months	
Other crops not listed				24 r	months	

^{*} Use the low rate on sandy soils and the higher rate on loamy / sandy clay soil.

PENTIUM 960 EC PAGE 26 OF 34

^{**} Variable control of these weeds.

^{**} Variable control of these weeds.

4.19 <u>Post-emergence application of Pentium 960 EC plus Ortron 750 WDG plus Terbucide Plus 900 WDG plus Nicosulfuron 750 WDG plus Villa 51 in maize for control of various weeds.</u>

NOTES

- Apply PENTIUM 960 EC post-emergence in the 2- to 6-leaf stage for broadleaf weeds, and 2- to 3leaf stage for grass weeds.
- Certain weeds may not be controlled effectively at the lower dosage rates.
- Refer to Terbucide Plus 900 WDG, Nicosulfuron 750 WDG and Villa 51 labels for a list of additional weeds controlled by these products, WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

	PLUS					
PENTIUM 960 EC 410 to 510 mℓ / ha *	Ortron 750 WDG 165 g / ha	WDG W		Nicosulf WI 60 g	DG	Villa 51 0.1 %
	WEE	DS CON	NTROLLED			
Botanical name				Commo	n name	
Amaranthus hybridus			Common pigweed			
Commelina benghale	nsis		Benghal wandering Jew			
Eleusine indica**			Goose grass			
Hibiscus trionum			Bladder weed			
Galinsoga parviflora			Gallant soldier			
Panicum schinzii			Sweet buffalo	grass		
Portulaca oleracea			Purslane			
Rumex acetosella			Sheep's sorrel			
Sorghum bicolor			Wild grain sorghum			
Sorghum halepense			Johnson grass			
Tagetes minuta			Tall Khaki wee	d		
Triticum aestivum			Volunteer whea			
Tribulus terrestris			Dubbeltjie / De	vil's thorn		
Xanthium strumarium			Cocklebur			
Re-cropping interva						
	g intervals are valid on					
	ylazine) according to s	oil type	was applied an	d normal o	r above av	erage rainfall
occurred, after applic	occurred, after application.					
Grain sorghum		6 m	nonths			
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains		months				
Other crops not listed 24 months		months				

^{*} Use the low rate on sandy soils and the higher rate on loamy / sandy clay soil.

5. GRAIN- AND FORAGE SORGHUM

PENTIUM 960 EC can be used in sorghum provided the seed has been pre-treated, as prescribed, with a suitable, registered seed treatment such as **Theory 960 EC** to prevent phytotoxicity by **PENTIUM 960 EC**. Please confirm with the seed company before proceeding.

5.1 PENTIUM 960 EC applied pre-emergence in sorghum after seed treatment. NOTE

- An application rate of 2.0 litres per hectare is recommended on turf soils, for improved control of Sweet signal grass and Yellow nutsedge.
- Prevent the formation of a soil crust through a shallow cultivation as soon as possible.
- Very wet conditions during the first 4 to 6 weeks after PENTIUM 960 EC application may damage the sorghum, but it is normally outgrown.

PENTIUM 960 EC PAGE 27 OF 34

^{**} Variable control of these weeds.

- The presence of seedling diseases may result in **PENTIUM 960 EC** damage to the sorghum.
- Post emergence applications of Agrizine 500 SC or Terbusien Super 600 SC can be applied in tank mixture with 2,4-D Amine 480 SL for broad leaf control in sorghum. Consult the Agrizine 500 SC or Terbusien Super 600 SC labels for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

Soil Type	% Clay	PENTIUM 960 EC t/ha
Sand / loamy sand / sandy loam	0 to 20	Not recommended
Sandy clay loam	21 to 30	0.8
Sandy clay loam / sandy clay	31 to 40	1.0
Turf	> 40	1.0 to 1.3

5.2 <u>Pre-emergence application rates of PENTIUM 960 EC followed by a post-emergence application of Terbugold 600 SC in grain sorghum.</u>

NOTES

- **Terbugold 600 SC** may be applied early post-emergence in Grain sorghum as a follow-up treatment after the pre-emergence application of **PENTIUM 960 EC**.
- Pre-treatment of the sorghum seed with the safener Theory 960 EC, will be required before PENTIUM 960 EC can be applied pre-emergence.
- Always add the surfactant Villa 51 to post-emergence TERBUGOLD 600 SC spray mixtures.
- The higher dosage rate of **PENTIUM 960 EC** on heavier soils can be used to improve the control of Yellow nutsedge (*Cyperus esculentus*) and Sweet signal grass (*Brachiaria eruciformis*) on turf.
- Application of sufficient fertilizer, band placed near the seed at planting, is recommended to enhance vigorous seedling growth.
- Refer to the Terbugoid 600 SC label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

		PRE-EMERGENCE		POST-EMER	GENCE	
Soil type	% Clay	PENTIUM 960 EC t/ha			gold 600 SC ℓ / ha	
Sand / laomy sand	0 to 15	Not recommended	Interlock®	Not rec	ommended	Villa 51
Sandy loam	16 to 20	0.5	200 to 300		2.6	0.1 %
Sandy clay loam	21 to 30	0.6	mℓ / /ha		3.0	0.1 /6
Heavier soil (turf soils included)	> 35	0.7 to 1.0			3.0	
Re-cropping intervals:						
Grain sorghum 12 months				onths		
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains			months			
Other crops not listed			24 r	months		

PENTIUM 960 EC PAGE 28 OF 34

6. **SUGARCANE**

Pre-emergence application.

Table 6.1: PENTIUM 960 EC can be applied pre-emergence as follows.

Application rates and mixtures	Comments
PENTIUM 960 EC 1.0 to 1.6 ℓ / ha	Apply higher rates if clay content > 35 %, to improve control of <i>Panicum maximum</i> and <i>Cyperus esculentus</i> and for longer residual control.
PENTIUM 960 EC 2.0 ℓ / ha	Apply on soils with > 35 % clay and > 1 % organic matter.
PENTIUM 960 EC As above PLUS 2.0 to 3.0 \(\ell/\) ha Ametryn 500 SC	For improved broadleaf control use the low rate of Ametryn 500 SC on light to medium soils and the high rate on medium to heavy soils. Re-cropping intervals: A re-cropping interval of 3 months apply to all crops, except sugarcane , for this tank mixture to prevent damage to follow up crops. Sugarcane does not have a re-cropping interval.
PENTIUM 960 EC As above followed post-emergence by MCPA 400 SL OR 2,4-D Amine 480 SL	Consult the MCPA 400 SL or 2,4-D Amine 480 SL labels for the complete particulars.

Post-emergence application (Sugarcane).

<u>Table 6.2:</u> PENTIUM 960 EC can be applied post-emergence, if it is applied in a tank mixture with an herbicide with post-emergence activity as recommended below.

Application rates and mixtures	Comments
PENTIUM 960 EC As for pre-emergence PLUS Ametryn 500 SC at 6.0 ℓ / ha PLUS 0.2 % non-ionic surfactant	Apply overall up to 5-leaf stage of sugarcane and as a directed spray later. Panicum maximum control with this treatment may be variable. Re-cropping intervals: A re-cropping interval of 3 months apply to all crops, except sugarcane, for this tank mixture to prevent damage to follow up crops. Sugarcane does not have a re-cropping interval.
PENTIUM 960 EC As for pre-emergence PLUS Ametryn 500 SC at 4.0 to 5.0 \(\ell \) ha PLUS MCPA 400 SL at 3.5 \(\ell \) ha OR 2,4-D Amine 480 SL at 3.0 \(\ell \) ha PLUS 0.2 % non-ionic surfactant	Direct spray between cane rows especially after the 5-leaf stage. Use the higher Ametryn 500 SC rate for severe grass infestations. Panicum maximum control with this treatment may be variable. Re-cropping intervals: A re-cropping interval of 3 months apply to all crops, except sugarcane, for this tank mixture to prevent damage to follow up crops. Sugarcane does not have a re-cropping interval.

PENTIUM 960 EC PAGE 29 OF 34

7. <u>TOBACCO</u> (Summer rainfall region only).

- Apply PENTIUM 960 EC within 3 days after transplanting while the plants are still wilted. When the tobacco is turgid, the spray must be directed to prevent it from entering the funnel, where the growing point may be damaged. If actively growing leaves are sprayed, scorching may occur. If PENTIUM 960 EC is sprayed on gravelly or soils with less than 10 % clay, the spray should be directed at least 10 cm on both sides away from the plant row to prevent leaching to the root zone of the tobacco.
- The **PENTIUM 960 EC** can be activated by applying overhead irrigation of 10 to 15 mm within 2 to 3 days after application, on soils with less than 35 % clay and 20 to 30 mm on soils with more than 35 % clay.

Table 7: PENTIUM 960 EC application rates in Tobacco.

Soil Type	% Clay	PENTIUM 960 EC ℓ / ha
Sand	0 to 10	0.5
Loamy sand / sandy loam	11 to 20	0.7
Sandy clay loam	21 to 35	1.0
Sandy clay	> 35	1.4

NOTE

- Only strong and healthy plants should be transplanted.
- Tobacco should be properly transplanted. Roots that are exposed to **PENTIUM 960 EC** at application will result in adversely affected plants.

8. FORESTRY (PINE & EUCALYPT PLANTATIONS)

Table 8: PENTIUM 960 EC dosage rates in forestry applications.

Soil Type	% Clay	PENTIUM 960 EC
Sand / loamy sand / sandy loam	0 to 20	1.0
Sandy clay loam	21 to 30	1.3
Sandy clay loam / sandy clay	>30	1.6 to 2.0

NOTE

- Apply PENTIUM 960 EC on a well-prepared weed-free seedbed immediately following transplanting of the young trees.
- Where grass weeds are present after planting of the trees, follow the PENTIUM 960 EC application one
 week later with an application of Forward 100 EC (L 9036) (Propaquizafop), as recommended.

PENTIUM 960 EC PAGE 30 OF 34

9. TREE NUT ORCHARDS

9.1 <u>Pre-emergence application of PENTIUM 960 EC in a tank mixture with Terbucide 600 WDG for the control of weeds in Tree nut orchards.</u>

NOTES

- Trials should be conducted on tree nuts orchards that is at least three (3) years old.
- The application should be made during spring with 200 litres water per hectare.
- Avoid contact of spray mixture with the foliage of the crop.
- Terbucide 600 WDG does not control established weeds or weeds that develop from underground vegetative material, e.g., rootstocks. Thus, apply a post-emergence weed burndown application of Brass 200 SL according to the label recommendations first, before applying PENTIUM 960 EC in a tank mixture with Terbucide 600 WDG for residual weed control.
- Refer to the **Terbucide 600 WDG** label for **WARNINGS**, **PRECAUTIONS**, **USE RESTRICTIONS** and **DIRECTIONS FOR USE**.

DENTUM OCO EO	PLUS				
PENTIUM 960 EC 3.0 ℓ / ha	Terbucide 600 WDG 3.4 kg / ha		Interlock®		
3.0 t / Ha			0 to 300 mℓ / ha		
	WEEDS CONTROLLED				
Botanical na	nme	Common	name		
Amaranthus hybridus	Common pigwe	ed			
Bidens pilosa	Blackjack	Blackjack			
Chenopodium album	White goosefoo				
Chenopodium carinatum	Green goosefo	ot			
Cleome monophylla	Spindle pod				
Datura ferox	Large thorn app				
Digitaria sanguinalis	Crab finger gra	ss			
Schkuhria pinnata	Dwarf marigold				
Tagetes minuta	Tall Khaki wee	-			
Tribulus terrestris	Dubbeltjie / Devil's thorn				
Urochloa mosambicensis Bushveld signalgrass					
Re-cropping intervals:					
	vals are valid only if the correct				
	o soil type was applied and normal or	above averaç	ge rainfall occurred, after		
application.	application.				
Grain sorghum 12 months			12 months		
Sunflowers, Groundnuts, Soybeans, Potatoes, Dry beans, Forage sorghum and Small grains			18 months		
Other crops not listed 24 mor			24 months		
Maize			1 month		

PENTIUM 960 EC PAGE 31 OF 34

9.2 <u>Pre-emergence application of PENTIUM 960 EC in a tank mixture with Sundry 500 WP for the control of weeds in Tree nut orchards.</u>

NOTES

- Tree nut orchards should be at least three (3) years old.
- The application should be made during spring with 200 litres water per hectare.
- Avoid contact of spray mixture with the foliage of the crop. Refer to the Sundry 500 WP label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.

PENTIUM 960 EC	PLUS			
3.0 ℓ / ha	Sundry 500 WP		Interlock [®]	
	C	0.4 kg / ha	200 to 300 mℓ / ha	
	WEEDS CO	NTROLLED		
Botanical name		Common name		
Amaranthus hybridus		Common pigweed		
Bidens pilosa	Blackjack			
Chenopodium album		White goosefoot		
Chenopodium carinatum		Green goosefoot		
Cleome monophyla*		Spindle pod		
Datura ferox		Large thorn apple		
Digitaria sanguinalis		Crab finger grass		
Tagetes minuta		Tall Khaki weed		
Tribulus terrestris		Dubbeltjie / Devil's thorn		
Re-cropping intervals:				
Soybeans & Groundnuts			14 days	
All other crops			4 months	

^{*} Variable control of these weeds.

WEEDS GENERALLY CONT	ROLLED BY PENTIUM 960 EC:
Brachiaria eruciformis	Sweet signal grass
Chloris virgata	Feather-top Chloris
Dactylotenium aegyptium	Crowfoot
Digitaria sanguinalis	Crabfinger-grass
Digitaria nuda	Naked crabfinger grass
Echinochloa crusgalli	Barnyard grass
Eleusine indica	Goose grass
Panicum maximum	Common buffalo grass
Panicum schinzii	Sweet buffalo grass
Pseudobrachiaria deflexa	False signal grass
Setaria pumila (=pallide-fusca)	Red bristle grass
Setaria verticillata	Bur bristle grass
Tragus berteronianus	Small carrotseed grass
Tragus racemosus	Large carrotseed grass
Urochloa mosambicensis	Bushveld herringbone grass
Urochloa panicoides	Herringbone grass
WEEDS VARIABLY CONTR	OLLED BY PENTIUM 960 EC:
Amaranthus hybridus	Common pigweed
Amaranthus spinosus	Thorny pigweed
Amaranthus thunbergii	Red pigweed
Chenopodium carinatum	Green goosefoot
Cleome monophylla	Spindlepod
Commelina benghalensis	Wandering Jew
Cyperus esculentus*	Yellow nutsedge
Datura ferox	Large thorn apple
Datura stramonium	Thorn apple
Galinsoga parviflora	Gallant soldier
Nicandra physaloides	Apple of Peru
Portulaca oleracea	Purslane

PENTIUM 960 EC PAGE 32 OF 34

NOTE

* The control of Yellow nutsedge (*Cyperus esculentus*) is dependent on a thorough ploughing immediately before planting, application 1 to 2 days after planting, which is followed by about 10 to 20 mm rain within 7 to 10 days after ploughing. More rain is required on heavy soils.

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

- RADICAL 250 EC (L 9159) = RAPID 250 EC (L 9160) (Flurochloridone),
- SUNDRY 500 WP (L 9299) = SYMPHONY 500 WP (L 9300) (Flumioxazin),
- CANTRON® 480 SC (L 8365 / N-AR 1323 / W 130604) = ASTRON® 480 SC (L 8366) = CANONNE 480 SC (L 8735) (Mesotrione),
- CANTRON® SMART 500 SC (L 9834) = ASTRON® SMART 500 SC (L 9832) = CANON SMART 500 SC (L 9937) (Mesotrione + Glyphosate),
- PLATINUM PLUS 915 EC (L 7844) = METOLACHLOR 915 EC (L 7841 / N-AR 1361),
- TERBUCIDE PLUS 900 WDG (L 9888) = TERBUWEED DUO 900 WDG (L 9890) = TERBUMAIS PLUS 900 WDG (L 9998) (Atrazine + Terbuthylazine),
- METOLACHLOR 800 EC (L 7433) = METOLACHLOR 800 EC (L 7137),
- PREMIUM 840 EC (L 8066) = LEAP 840 EC (L 8064 / N-AR 1103) (acetochlor + benoxacor).
- TERBUCIDE 600 WDG (L 8799 / W 1301046) = TERBUWEED 600 WDG (L 8800) = TERBUMAIS 600 WDG (L 8798) (Terbuthylazine),
- GATLING 700 SC (L 8349) = BRENNO 700 SC (L 8391),
- NICORON 750 WDG (L 8045 / N-AR 1335) = NICOSULFURON 750 WDG (L 8059),
- HALO 750 WDG (L 8283 / N-AR 1337) = CROWN 750 WDG (L 8282) (Halosulfuron),
- SLASH PLUS 540 SL (L 8819) = PANGA PLUS 540 SL (L 8818) = LYNCH PLUS 540 SL (L 8816)
 (Glyphosate),
- LUMEN 420 SC (L 10645) = LOUPE 420 SC (L 10621) = LUMINA 420 SC (L 10819) (Tembotrione),
- ORTRON 750 WDG (L 10707) = GRANTRON 750 WDG (L 10706) (Mesotrione),
- TERBUGOLD 600 SC (L 10507) = TERBUCLEAR 600 SC (L 10506) = PARTISAN GOLD 600 SC (L 10747) (Terbuthylazine + S-metolachlor),
- PENTIUM PLUS 915 EC (L 9741) = PALLADIUM PLUS 915 EC (L 9359) = PARTISAN PLUS 915 EC (L 9942) (S-metolachlor),
- PENTIUM ULTRA 660 SC (L 9924) = PALLADIUM ULTRA 660 SC (L 9922) = PARTISAN ULTRA 660 SC (L 9973) (S-metolachlor + Atrazine),
- EXTEND 800 WDG (L 9108) = DEVELOP 800 WDG (L 9109) (Diuron),
- **VELOCITY® SUPER** (L 9603 / W 130996) = **AMS-SUPER** (L 9758),
- VELOCITY®-DRYMAX (L 9454 / W 130995 / N-AR 1528) = AMS-GRANULE (L 9610),
- VILLA 51 (L8050 / W 130454 / N-AR 1090) = WEN 51 (L8351) and
- BRASS 200 SL (L 9279) = BOUND 200 SL (L 9280 / N-AR 1735) (Glufosinate ammonium).

AMETRYN 500 SC, MCPA 400 SL, METRIBUZIN 480 SC, DEVELOP 800 WDG, TERBUSIEN SUPER 600 SC, RAPID 250 EC, SYMPHONY 500 WP, FORWARD 100 EC, BRENNO 700 SC, NICORON 750 WDG, HALO 750 WDG, TERBUWEED 600 WDG, PANGA PLUS 540 SL, METOLACHLOR 800 EC, PLATINUM PLUS 915 EC, LEAP 840 EC, BOUND 200 SL, TERBUWEED DUO 900 WDG, LOUPE 420 SC, PALLADIUM PLUS 915 EC, GRANTRON 750 WDG, PALLADIUM ULTRA 660 SC, TERBUCLEAR 600 SC and THEORY 960 EC and are registered products of VILLA CROP PROTECTION (PTY) LTD.

VELOCITY® SUPER, VELOCITY®-DRYMAX, CANTRON® SMART 480 SC and CANTRON® 480 SC are registered trademarks of VILLA CROP PROTECTION (PTY) LTD.

ASTRON® SMART 500 SC and ASTRON® 480 SC are registered trademarks of UNIVERSAL CROP PROTECTION (PTY) LTD.

2,4-D AMINE 480 SL, BRASS 200 SL, EXTEND 800 WDG, RADICAL 250 EC, AGRIZINE 500 SC, SUNDRY 500 WP, GATLING 700 SC, SLASH PLUS 540 SL, NICOSULFURON 750 WDG, CROWN 750 WDG, TERBUCIDE 600 WDG, METOLACHLOR 800 EC, PREMIUM 840 EC, METOLACHLOR 915 EC, TERBUCIDE PLUS 900 WDG, LUMEN 420 SC, METOLACHLOR 915 EC, ORTRON 750 WDG,

PENTIUM 960 EC PAGE 33 OF 34

TERBUGOLD 600 SC, PENTIUM ULTRA 660 SC, PENTIUM PLUS 915 EC, METRICANE 700 WDG, VELOCITY®-DRYMAX, AMS-GRANULE, VELOCITY® SUPER, AMS-SUPER VILLA 51, WEN 51 and EPTC 720 EC are registered products of UNIVERSAL CROP PROTECTION (PTY) LTD.

LYNCH PLUS 540 SL, CANONNE 480 SL, TERBUMAIS 600 WDG, TERBUMAIS PLUS 900 WDG, PARTISAN PLUS 915 EC, LUMINA 420 SC, PARTISAN ULTRA 660 SC and PARTISAN GOLD 600 SC are registered products of CROPASURE (PTY) LTD.

DESTINAIRE®, INTERLOCK®, PROTANK® LIQUID CLEANER and CLASS ACT® NG is registered trademarks of WINFIELD SOLUTIONS REGISTRATION HOLDINGS (PTY) LTD.

PENTIUM 960 EC PAGE 34 OF 34