Read the label before opening the container. For full particulars, see enclosed leaflet.

KEEP OUT OF REACH OF CHILDREN AND ANIMALS

PINNACLE

South Africa Reg. No: L6485 Act No. 36 of 1947

HRAC HERBICIDE GROUP CODE: C1

Pinnacle is a suspension concentrate soil acting herbicide with residual action for the prevention of weed growth in wine grape vineyards and apple and pear orchards in the Western Cape.

ACTIVE INGREDIENT:

Terbuthylazine (Triazine).....250g/ℓ
Simazine (Triazine).....250g/ℓ
Total active ingredient.....500g/ℓ

Product Information: 072 678 8226
In case of poisoning: 082 446 8946

HAZARD STATEMENTS

- Harmful if swallowed
- Suspected of causing cancer
- May cause damage to organs through prolonged or repeated exposure.
- Very toxic to aquatic life with long lasting effects.



PRECAUTIONARY STATEMENTS

- Wash hands and face thoroughly after handling.
- Avoid release to the environment.

enviro™ bio-chem

Registration holder: Enviro Industries (Pty) Ltd
Co. Reg. No: 1999/006136/07
44 Kerk Street, Lichtenburg NW, South-Africa
Tel: +27 12 006 0063 | Fax: +27 86 541 7948
Web: www.envirobiochem.co.za

Expiry Date:
Batch No:
Date of Manufacture:

UN No. 3082

WARNINGS:

- Harmful if swallowed
- Suspected of causing cancer
- May cause damage to organs through prolonged or repeated exposure.
- Very toxic to aquatic life with long lasting effects.
- Store in a cool place away from food, feedstuffs, seed, fertilizers and other agricultural products.
- Keep out of reach of children, uninformed persons and animals.

Although this remedy has been extensively tested under a wide 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 pest 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 instruction or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:

- Do not handle until all safety precautions have been read and understood.
- Do not breathe mist, vapours and spray.
- Wash hands and face thoroughly after handling.
- Do not eat, drink, or smoke when using this product.
- Avoid release to the environment.
- Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
- If exposed or concerned: Get medical attention.
- Collect spillage
- Avoid spray drift contaminating other crops, pastures, rivers, dams, boreholes and areas not to be treated.
- Prevent the contamination of food, feeds, drinking water and eating utensils.
- Keep in original container, tightly closed and in a safe place.
- Triple rinse empty container in the following manner: Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the empty container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsings to the content of the spray tank. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.
- Do not mix and load within at least 15 meter from boreholes, streams, rivers and dams.
- Do not apply within at least 15 meter from boreholes, streams, rivers and dams.
- Do not apply within at least 60 meter of dams.

RELEVANT SUBSTANCES:

Simazine 22.9 %
Terbuthylazine 23 %
Formalin (Anti bacteria) < 0.1 %

FIRST AID TREATMENT:

INHALATION: Remove person to fresh air and keep comfortable for breathing.
INGESTION: Immediately call a POISON CENTER or doctor/physician.
SKIN CONTACT: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

RESISTANCE WARNING:

For resistance management, **PINNACLE** is a **group code C1** herbicide. Any weed population may contain individuals naturally resistant to **PINNACLE** and other **group code C1** herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **PINNACLE** or any other **group code C1** herbicide.
To delay herbicide resistance:

- Avoid the exclusive repeated use of herbicides from the same herbicide group code.
- Alternate or tank mix with products from difference herbicide group codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE: Use only as directed.

PINNACLE is a long lasting spray applied herbicide which acts in the soil to control the germination of weed seeds on such sites as wine grape vineyards, apple and pear orchards. It should be applied prior to the emergence of the weed to the clean soil. Should weeds have already emerged, use an appropriate herbicide in combination with **PINNACLE** (Refer to combinations below). **PINNACLE** does not control emerged weeds. Rainfall is necessary to leach **PINNACLE** into the soil before its action can take place.

TANK MIX COMBINATIONS WITH OTHER HERBICIDES:

In order to control existing weeds a combination of a systemic or suitable knockdown herbicide may be used in combination with **PINNACLE**. The label recommendations for these products should be followed, and compatibility of the mixture should be established in each case.
PINNACLE may be used in combination with **TUMBLEWEED** (Reg. No: L4781), **ENVIRO GLYPHOSATE 360** (Reg. No: L4767) or gramoxone in order to control established weeds, but should be mixed as prescribed. Consult the labels of these respective products to determine the dosage rate. Do not use less than 4.5ℓ **TUMBLEWEED** or 6ℓ **ENVIRO GLYPHOSATE 360**, per hectare in combination with **PINNACLE**.
PINNACLE may be added to a spray mix containing **TUMBLEWEED** or **ENVIRO GLYPHOSATE 360** to provide residual weed control.
Always consult the respective labels and follow the directions for use.

MIXING INSTRUCTIONS:

- Shake well before use.
- Replace cap after pouring.
- Half-fill the spray tank with water then pour the required quantity of **PINNACLE** through a 50 mesh sieve into the tank.
- Top up the tank with water to the final volume required.
- Ensure thorough agitation during filling and spraying operations.
- When used in tank mixture with either **TUMBLEWEED, ENVIRO GLYPHOSATE 360** or gramoxone, first add the **PINNACLE** and mix well and finally add either the **TUMBLEWEED, ENVIRO GLYPHOSATE 360** or gramoxone whilst the spray tank is filled to its final volume with water.
- After each day's spraying flush spray equipment thoroughly with clean water.

SPRAY WATER MODIFIERS:

The addition of ammonium sulphate at 1 to 2kg per 100ℓ spray water, or bladbuff 5 may improve the action when hard waters are used to apply combinations of **PINNACLE** and **TUMBLEWEED** or **ENVIRO GLYPHOSATE 360**. The addition of herbicidal spray oils is not recommended with combination mixtures.
A compatibility test, with the proposed combination should be made, using the spray water intended for use, to determine if flocculation (rapid settling-out of chemicals) occurs, in which case special precautions should be taken to ensure adequate agitation in the spray tank.

APPLICATION:

PINNACLE may be applied by means of knapsack sprayers or tractor operated boom sprayers. Calibrate the equipment to determine the volume applied and ensure that the spray is evenly distributed the over the target area. Use a minimum of 200ℓ/ha, at a nozzle pressure of 200 - 300kPa. The mixture should be gently agitated at all times prior to and during spraying to prevent deposition on the tank bottom. A knapsack sprayer fitted with a paddle agitator, such as the **Matabi**, is recommended. Always

flush out the spray lines immediately after usage. Dispose of washings in a safe place.

RECOMMENDATIONS:

i) Control of annual weeds in wine grape vineyards (on vines older than 3 years).

PINNACLE is registered for use with the following wine grape varieties (a) Chenin Blanc (b) Cabernet sauvignon and (c) Merlot

APPLICATION RATE: Wine grape vineyards		
CROP	SOIL TYPE	ℓ PINNACLE/ha
Chenin Blanc	>15% clay	6ℓ/ha
Cabernet sauvignon	>15% clay	6ℓ/ha
Merlot	>15% clay	6ℓ/ha

ii) Control of annual weeds in apple and pear orchards (on trees older than 3 years):

Directed Application:

APPLICATION RATES (Only trees older than 3 years)		
CROP	SOIL TYPE	ℓ PINNACLE/ha
Apples	<15% clay	4
	>15% clay	6
Pears	<15% clay	NOT RECOMMENDED
	>15% clay	6

NOTE: PINNACLE does not have any post-emergence activity and must, therefore, be applied to soil, free of emerged weeds at the time of application or must be used in combination with a suitable postemergenceherbicide when weeds are present. Best results will be obtained when **PINNACLE** is applied subsequent to the application of a post-emergence herbicide such as **TUMBLEWEED**. A dense stand of weeds may, however, result in insufficient penetration of **PINNACLE** to the soil surface. The best result with **PINNACLE** is obtained when application is made as late as possible in the season (end October, beginning November) but at the first signs of weed germination. Rain or irrigation is required shortly after application of **PINNACLE** to activate the product. Application made during late spring or early summer must therefore be followed by irrigation if rain does not occur within 10 days of application.

Remarks:

- Apply in 200 - 300ℓ water/ha.
- When **PINNACLE** is used in combination with **TUMBLEWEED** or gramoxone follow all the instructions on the **TUMBLEWEED**/ gramoxone label.
- The residual activity on grasses may not always be satisfactory, particularly where the product was applied early (July to September) and / or on light soils under conditions of heavy rainfall or irrigation.
- Do not apply on soils with a pH in water of 7 or higher and poorly drained soils.
- Do not apply to trees suffering from micro-nutrient deficiencies.

- PINNACLE has a relatively long residual activity. Therefore do not plant any sensitive crops such as vegetables, legumes or winter cereals within 18 months after treatment.
- Do not apply to interplants before they are older than 3 years.

ACKNOWLEDGEMENTS OF TRADEMARKS:

Bladbuff 5 : Plaaskem (PTY) LTD PO Box 87005, HOUGHTON, 2041, RSA
Gramoxone: Zeneca Agrochemicals SA (PTY) LTD Private Bag X8, GALLO MANOR, 2052, RSA
Matabi : Goizper S. Coop, Ltda, PO Box 211-20570, Bergara, Spain.

LIST OF WEEDS CONTROLLED BY PRE-EMERGENCE TREATMENT			
GRASSES		BROADLEAF WEEDS	
Avena Fatua	Common Wild Oats	*Acanthospermum Australe*	Creeping Starbur
Bromus Diandrus	Ripgut Brome	*Acanthospermum Hispidum*	Upright Starbur
Bromus Unioloides	Rescue Grass	*Amaranthus Hybrisdus*	Common Pigweed
Chloris Virgata	Feathertop Chloris	*Amaranthus Spinosus*	Thorny Pigweed
Digitaria Cillarissanguinalis	Crab Finger-Grass	*Arctotheca Calendula*	Cape Marigold
Eleusine Indica	Goose Grass	*Bidens Bipinnata*	Spanish Blackjack
Eragrotis Teff	Teffgrass	*Bidens Pilosa*	Common Blackjack
Lolium Temulentum	Darnel	*Chenopodium Album*	White Goosefoot
Lolium Perenne	Perennial Ryegrass	*Chenopodium Murale*	Nettle Leafed Goosefoot
Panicum Schinzii	Sweet Buffalo Grass	*Conyza Canadensis*	Fleabane
Setaria Pallide-Fusca	Red Bristle Grass	*Conyza Sumatrensis*	Tall Fleabane
Setaria Verticillata	Sticky Bristle Grass	*Cosmos Bipinnatus*	Cosmos
Urocholoa Panicoides	Herringbone Grass	*Datura Ferox*	Large Thorne Apple
		Datura Stammonium	Thorn Apple
		Emex Australis	Spiny Emex
		Erodium Moschatum	Musk Heron's Bill
		Galinsoga Parviflora	Gallant Soldier
		Polygonum Aviculare	Prostate Knotweed
		Portulaca Oleracea	Common Purslane
		Raphanus Raphanistrum	Wild Radish
		Schkuhria Pinnata	Dwarf Marigold
		Sonchus Oleracea	Common Sow Thistle
		Tagetes Minuta	Khaki Weed

LIST OF WEEDS CONTROLLED BY PRE-EMERGENCE TREATMENT	
Tribulus Terrestris	Common Dubbeltjie
Vicia Sativa	Broad-Leafed Purple Vetch