

# NOVASATE 360 SL GLYPHOSATE 360g/L SL

Distributed by: Harvest Chemicals  
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Product Information Tel No: 082 893 3642  
In Case of Poisoning: 082 446 8946

**HARVEST**  
CHEMICALS



**Soluble concentrate post emergence non selective systemic herbicide for the control of annual and perennial weeds in crops and industrial areas as indicated.**

Batch No	Reg. No. L 10 013, Act No 36 of 1947.	Reg Nr L 10 013, Wet Nr. 36 van 1947.	Lot Nr
<input type="text"/>	<b>HRAC HERBACIDE GROUP CODE</b> 9		<input type="text"/>
Date of manufacture	<b>Active Ingredient:</b> Glyphosate (acid equivalent 480g/L)	<b>360g/l</b>	<b>AktieweBestanddeel:</b>
<input type="text"/>	<b>Nett Volume</b>	<b>20l</b>	<b>Netto Volume</b>
			Vervaardigingsdatum <input type="text"/>



CAUTION  
VERSIGTIG



## WARNINGS:

- Handle with care.
- Poisonous by swallowing.
- Irritating to eyes and skin.
- **NovaSate 360 SL** can be corrosive to zinc-lined spray tanks and other metal equipment. Thoroughly wash all spray equipment after use. Do not mix, store or apply **NovaSate 360 SL** solutions in galvanised steel or unlined steel (except stainless steel) containers or spray tanks. **NovaSate 360 SL** can react with such containers to produce hydrogen gas which may form a highly combustible and explosive gas mixture.
- **Aerial application:** notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings.
- Store away from food, feed, seed, fertilizers and other agricultural chemicals.
- Keep out of reach of children, animals uninformed persons.
- **Re-entry:** do not enter treated area until spray deposit has dried unless wearing protective clothing.

**Although this product has been extensively tested under a large variety of conditions, the registration holder does not warrant that this product will be effective under all conditions. The activity 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 weed 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 the event of any uncertainty.**

## PRECAUTIONS:

- Do not breathe fumes or spray mist.
- In case of accidental contact with skin or eyes, wash immediately with plenty of water and In the case of eyes get medical attention necessary.
- Prevent spray drift and/or contamination onto susceptible or edible crops, grazing or any other areas not under treatment, as this may cause serious crop damage.
- **NovaSate 360 SL** is actively absorbed through immature bark and leaves of most plants and trees. Contact with immature bark, such as in trees younger than about four years, can result in serious localised or translocated damage. THEREFORE CONTACT WITH LEAVES, GREEN OR IMMATURE BARK AND FRUIT OF DESIRED PLANTS, WHETHER DIRECT OR BY SPRAY DRIFT, MUST BE AVOIDED.
- TRIPLE RINSE empty containers 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 container three times with a volume of water equal to a minimum of 10 % of that of the container. Add these rinsings to the contents of the spray tank.
- Destroy empty container by perforation, flattening and burying. Do not use for any other purpose.
- Prevent contamination of food, drinking water and eating utensils.

## RESISTANCE WARNING:

For resistance management **NovaSate 360 SL** is a group code G herbicide. Any weed population may contain individuals naturally resistant to **NovaSate 360 SL** and other group code G herbicides. The resistant individuals can eventually dominate the weed population If these herbicides are used repeatedly. These resistant weeds may not be controlled by **NovaSate 360 SL** or any other group G herbicides. To delay herbicide resistance:

1. Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide codes.
  2. Integrate control methods (chemical, cultural and biological) into weed control programs.
- For specific information on resistance management contact your local distributor.

## **DIRECTIONS FOR USE. Use as directed**

### General information

- **NovaSate 360 SL** is a nonselective systemic herbicide being active ONLY when applied post-emergence of the foliage and green bark of plants.
- Action is slow - maximum killing effect is only visible from two weeks after application onwards.
- Apply when weeds are growing vigorously in spring and summer, or in autumn in the case of difficult to control perennial weeds. When weeds are actively translocating nutrients into roots, bulbs, rhizomes and stolons (See recommendations marked \* in list of weeds controlled).
- It is essential to spot spray regrowth of weeds as recommended to prevent re-infestation of the treated area.
- Irrigation a few days prior to application of **NovaSate 360 SL** ensures that weeds are growing actively, resulting in optimum efficacy.
- Do NOT spray whilst the weeds are wet.
- Do NOT spray on dormant weeds or weeds under temperature or moisture stress.
- Rain or irrigation within 6 hours of application can reduce **NovaSate 360 SL** efficacy on weeds.
- Do NOT spray on weed foliage covered with a layer of dust. In these situations, apply after a recent rain, but ensure that weeds have dried before spraying.
- Pesticide run-off onto weeds treated with **NovaSate 360 SL** in orchards can adversely affect the herbicide's activity, Do NOT spray pesticides within 12 hours of a **NovaSate 360 SL** application.
- **NovaSate 360 SL** has little or no pre-emergence activity, therefore repeat applications are necessary to control weeds germinating from seed.
- Ensure that target weeds are fully exposed to the **NovaSate 360 SL** spray. In mixed weed situations (annuals in amongst the problem perennials) mow or spray out annuals: wait for vigorous regrowth of perennials and then spray.
- Under certain conditions the addition of a surfactant may be advantageous.

## COMPATIBILITY

**NovaSate 360 SL** is incompatible with most pesticides and agricultural chemicals. Do NOT tank mix with other chemicals except buffers or ammonium sulphate.

## APPLICATION INFORMATION

**NovaSate 360 SL** can be applied

in spray volumes up to 600 l/ha. Various types of equipment are suitable for **NovaSate 360 SL** applications, such as tractor mounted booms, knapsack sprayers, mistblower and aerial application.

- Always ensure that spray equipment is clean and free of rust and dust.
  - Remove sediments e.g. residues of wettable powder pesticides, from spray tanks before adding **NovaSate 360 SL**.
  - Always use clean water. Avoid the use of brackish or muddy water or water with a high colloidal content derived from soils high in organic matter. Where alkaline hard water occurs a buffer should be added according to label recommendations.
  - Correctly calibrate all sprayers under field conditions.
  - In situations where drift may be hazardous, use low pressures of 100 to 200 kPa or low drift nozzles when spraying.
  - It is not necessary to spray to the point of run off, but essential to ensure complete coverage of the target weed.
- REMEMBER A FINE EVEN DROPLET DISTRIBUTION ON THE TARGET WEED IS ESSENTIAL FOR GOOD RESULTS.

## AERIAL APPLICATION

Aerial application of **NovaSate 360 SL** may only be done by a registered aerial application operator using a correctly calibrated registered aircraft according to the instructions of *South African National Standard 10118: The Aerial Application of Agricultural Remedies*. 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:**

- **Volume:** a spray mixture volume of 30 to 35 ℓ / 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.
- **Droplet coverage:** 30 to 40 droplets /cm<sup>2</sup> must be recovered at the target area.
- **Droplet size:** a droplet spectrum with a VMD of 300 to 350 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- **Flying height:** maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.

Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span. Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices. The difference in temperature between the wet and dry bulb thermometers of a whirling hygrometer, should not exceed 8°C. Stop spraying if the wind speed exceeds 15 km/h.

Stop spraying under turbulent, unstable and dry conditions during the heat of the day.

Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (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 drifting of the suspended spray cloud away from the target field.

Ensure 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 logbook and kept for future reference.

#### **SURFACTANTS / ADDITIVES:**

For optimum results, a minimum of 1.5 % **NovaSate 360 SL** solution in the total spray volume is recommended. Where the **NovaSate 360 SL** concentration is less than 1,5 % of the total spray volume, it is recommended to add surfactant to the spray volume. An alternative to surfactants is ammonium sulphate dissolved in the spray water at 2,0 kg/100 ℓ spray volume (2 %).

#### **Control of perennial and noxious Invader weeds:**

Perennial grasses, and perennial broadleaf weeds and sedges controlled by **NovaSate 360 SL**.

**ES=Early Spring   S= Summer   A=Autumn   W=Winter   T= Application timing**

#### **Percentage sprays are based on the following:**

1. Knapsack Sprayer delivering 200 ℓ/ha.
2. Mistblower delivering 150 ℓ/ha.
3. For greater volumes than 1 and 2 above, adjust percentages accordingly up to a maximum of 600 ℓ/ha.
4. Percentage spray recommendations always refer to a % spray made up of litres of **NovaSate 360 SL** in 100 ℓ water, e.g. 1,5 % solution = 1,5ℓ **NovaSate 360 SL** in 100 ℓ water.

Crop / Pest	T	Rate ℓ/ha	Remarks
<b>Bugweed</b> ( <i>Solanum mauritianum</i> )	S A A/ES	2,0 ℓ/ha	Or 1,5 % solution. <u>Large trees</u> : cut back stems to ± 20 cm from soil level. Wait until regrowth is knee height before spraying, Spray seedlings up to 1 m high using a 0,5 % solution. <u>Spray seedlings only</u> : bipinnate leaf stage 2.0 ℓ/ha: seedlings up to 60 cm high 4,0 ℓ/ha. Or 1,5 % solution.
<b>Wild grain sorghum</b> ( <i>Sorghum bicolor</i> )	S/A		Or 3,0 % solution as a cut stump treatment. Apply Immediately after cutting to the cambium region. Or 1,5 % solution.
<b>Ink Berry</b> ( <i>Phytolacca heptandra</i> )	S	3,0 ℓ/ha	Or 1,5 % solution. Spray wattle up to 1 m in height (knapsack sprayer).
<b>Eupatorium</b> ( <i>Chromolaena odorata</i> )	ES		Or 1,5 % solution (knapsack sprayer).
<b>Plantain</b> ( <i>Plantago lanceolata</i> )	S/A		Or 1,5 % solution (knapsack sprayer). Apply before flowering only.
<b>Small mallow **</b> ( <i>Malva parviflora</i> )	ES		Apply 1,5 % solution to seedling plants up to 1 m high. Taller shrubs apply 2,0 % solution. For shrubs and/or tall trees slash and spray regrowth with 1,5 to 2,0 % solution when 1 m high,
<b>Sorrel</b> ( <i>Rumex spp</i> )	ES		Apply before flowering only. Apply before flowering only.
<b>Johnson grass</b> ( <i>Sorghum halepense</i> )	S/A	4,0 ℓ/ha	Or 1,5 % solution. Follow up spray on regrowth using 3 ℓ/ha or spot spray using 1.5 % solution.
<b>Kikuyu</b> ( <i>Pennisetum clandestinum</i> )*	S		Apply on active growth during summer. Spray regrowth using 3 ℓ/ha or spot spray using 1,5 % solution.
<b>Eupatorium</b> ( <i>Chromolaena odorata</i> )	S/A		Apply using high volume application 400 ℓ/ha total mixture. Spot spray regrowth in early spring with a 2 % solution.
<b>American bramble</b> ( <i>Rubus spp</i> )	A/S	6,0 ℓ/ha	Or spray using 3 % solution (knapsack sprayer) or 4 % solution (mistblower).
<b>Buffalo or Ubabe grass</b> ( <i>Panicum maximum</i> )	S		Follow up spray on regrowth using 3 ℓ/ha or spot spray using 1,5 % solution.
<b>Common reed</b> ( <i>Phragmites australis</i> )	A		Or spray using 3 % solution (knapsack sprayer) or 4 % solution (mistblower). Apply in autumn and follow up in summer on active regrowth using 4 ℓ/ha or spot spray with 2,0 % solution or apply in summer and follow up in autumn.
<b>Common paspalum</b> ( <i>Paspalum dilatatum</i> )	SA		Or spray using 3 % solution (knapsack sprayer) or 4 % solution (mistblower). Apply at 20 - 30 % flowering stage. Regrowth should be slashed and the following re-growth treated when it is ± 45 cm high. Apply at flower but before seeds are shed, follow up on regrowth using 3 ℓ/ha or spot spray using 1,5 % solution.
<b>Field bindweed</b> ( <i>Convolvulus arvensis</i> )	S	6,0 ℓ/ha	Apply at beginning of flowering. Follow up using 1,5 % solution on regrowth, should this be necessary.
<b>Lantana</b> ( <i>Lantana camara</i> )	A/S		Or spray using 3 % solution (knapsack sprayer) or 4 % solution (mistblower).
<b>Purple nutsedge</b> ( <i>Cyperus rotundus</i> )	S	6,0 ℓ/ha	Apply at flowering (in orchard crops), spray re-growth with 3 ℓ/ha or spot spray using 1,5 % solution (Feb/Mar).
<b>Yellow nutsedge</b> ( <i>Cyperus esculentus</i> )	S		Apply at flowering (in orchard crops), spray re- growth with 3 ℓ/ha or spot spray using 1,5 % solution (Feb/March).
<b>Couch paspalum</b> ( <i>Paspalum paspaloides</i> )	S	8,0 ℓ/ha	Apply at flowering but before seed shed. Follow up spray on regrowth 4 ℓ/ha or spot spray with 2 % solution.
<b>Eupatorium</b> ( <i>Chromolaena odorata</i> )	S/A		Slash established plants and allow to re-grow to 50-120 cm. Spray at 1,0 ℓ / 100 ℓ spray volume (i.e. 1,0 %) to give complete droplet cover of foliage. Previously slashed multi-stem plants may require a follow-up treatment.

Crop / Pest	Dosage	Remarks
<p>Apples Apricots Avocados Bananas Citrus Guava Mangoes Nectarines Peaches Pears Plums Prunes Deciduous fruit &amp; grape-vines</p>	<p><u>Annual weeds</u> 1.0 - 3.0 ℓ/ha</p> <p><u>Perennial weeds</u> See specific rate in the above table</p> <p><b>Summer rainfall area</b> <u>Annual weeds</u> 1.0 - 3.0 ℓ/ha <u>Perennial weeds</u> See specific rate in the above table</p> <p><b>Winter rainfall area</b> <u>Annual weeds</u> See above <u>Perennial weeds</u> 9,0 ℓ/ha 9,0 ℓ/ha 4,0 ℓ/ha</p>	<p><u>Dosage rate</u>: use the higher rate on mature weeds. <u>Young trees with green bark (generally younger than 4 years)</u>: shield stems from spray contact. <u>Bananas</u>: protect suckers and green stems from spray contact. Application can be made to nursery and mature plants.</p> <p><u>Dosage rate</u>: use the higher rate on mature weeds. <u>Young trees with green bark</u>: shield stems from spray contact. <u>Vines</u>: apply only to vines older than 22 years. Apply before bud burst as a spray directed on weeds. <u>Bush and low trellised vines under 60 cm high</u>: Apply pre-bud burst in spring, <i>Paspalum paspafotdes</i> (couch paspalum) <i>Cynodon dactylon</i> (Common Quick grass) <i>Pennisetum clandestinum</i> (Kikuyu) For perennial weed control in the winter rainfall area, apply in autumn after 75 % natural leaf drop but before the first frosts.</p>
<p>Arable crop land before planting of crop</p>	<p><u>Annual weeds</u> 1.0 - 3.0 ℓ/ha</p> <p><u>Perennial weeds</u> See recommendations under weed species</p>	<p>Use <b>NovaSate 360 SL</b> after harvesting of previous crop and prior to emergence of new crop. <u>Dosage rate</u>: use the higher rates on annual weeds exceeding the 12 leaf stage.</p>
<p>Forestry</p>	<p>Perennial grasses, Perennial broadleaf, Sedges and Noxious Invader Weeds - REFER to Control of Perennial and Noxious Invader Weed recommendations on the label.</p>	<p>For the establishment at firebreaks, either total or tracer lines. Replace trace lines in virgin veld. Wattle re-establishment. Control of noxious and problem weeds.</p>