

Sonneblom PLUS

Reg. No. L 11710 Act/Wet No. 36 of/van 1947



A soluble concentrate, post-emergent herbicide for the control of annual broadleaf – and grass weeds in Sunflowers.

ACTIVE INGREDIENT

Imazapyr (imidazolinone) 7.5 g/L
Imazamox (imidazolinone) 16.5 g/L

GROUP

2

HERBICIDE



WARNING

HAZARD STATEMENTS: Toxic to aquatic life | Toxic to aquatic life with long lasting effects
Wear eye protection/face protection | Avoid release to the environment.

PRECAUTIONARY STATEMENTS: Wash hands thoroughly after handling | Do not touch eyes
Wear eye protection/face protection | Immediately rinse with water for several minutes
Remove contact lenses, if present and easy to do | Continue rinsing | Get medical help
Avoid release to the environment | Collect spillage | Dispose of contents/container in accordance
with local/regional/national/international regulations.

Registration holder: Green Island Investments (Pty) Ltd.
Co. Reg. No.: 2013/043963/07
P.O. Box 1822, Heidelberg 1438, South Africa
Tel: 078 737 9236

24 HR EMERGENCY NUMBERS

Griffon Poison Information Centre: +27 82 446 8946
24 Hr Transport / Spill emergency no:
(Hazcall24) +27 86 044 4411 (Typhoon Plant Protection)

Distributed by: Typhoon Plant Protection (Pty) Ltd.
Co. Reg. No.: 1998/006156/07, C/O Farm Vlakfontein
Corner of the R23 Benoni Road & R550 Nigel Road
Brakpan District, Heidelberg 1438, Gauteng, South Africa
Tel: 078 737 9236

Net Volume:

ℓ

Expiry Date:
Batch No:
Date of Manufacture:
U.N. No. 3082

 **Typhoon**
PLANT PROTECTION

READ LABEL IN DETAIL BEFORE OPENING THE CONTAINER. FOR FULL PARTICULARS, SEE ENCLOSED LEAFLET.
KEEP OUT OF REACH OF CHILDREN AND ANIMALS.



WARNINGS:**HAZARD STATEMENTS:**

- Causes serious eye damage.
- Toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.

WITHHOLDING PERIODS:**Allow the following minimum number of days between the last application and harvest:**

Sunflower

70 days

- Handle with care.
- Poisonous when swallowed.
- Store in a cool place away from food, feeds and seed.
- Keep out of reach of children, uninformed persons and animals. To avoid injury to other crops, spray equipment used for **SONNEBLOM PLUS** applications must be drained after use and thoroughly cleaned with water before being used to apply other products to crops.

Although this remedy has been extensively tested under a large variety of conditions the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions; quality of dilution water; compatibility with other substances not indicated on the label and the occurrence of resistance of 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 the event of any uncertainty.

PRECAUTIONS:

PRECAUTIONARY STATEMENTS:

- Wash hands thoroughly after handling. **Do not** touch eyes.
 - Wear eye protection/face protection.
 - Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - Get medical help.
 - Avoid release to the environment.
 - Collect spillage.
 - Dispose of contents/container in accordance with local/regional/national/international regulations.
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- **Do not** inhale fumes or spray mist.
 - Wash with soap and water after use and accidental skin contact
 - **Do not** eat, drink or smoke while mixing or spraying unless having washed hands and face.
 - Avoid spray drift onto other crops, grazing, rivers, dams and any area not under treatment.
 - Thoroughly wash and rinse spray equipment after use and dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
 - **Do not** apply where the roots of desirable plants can absorb the chemical.
 - **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three (3) times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). **Do not** bury, burn or donate the container to any other parties that may use it as a container for food or beverages.
 - Destroy the empty container by perforation and flattening and dispose of it in a safe way.

RELEVANT SUBSTANCES:

Ingredients	CAS number	(G/L)
Imazapyr	81334-34-1	7.5
Imazamox	114311-32-9	16.5
Sodium lignosulfonate	161074-97-1	5.00
Calcium dodecyl benzene sulfonate	60-00-4	3.00

FIRST AID TREATMENT

- **Inhalation:** Remove the patient immediately from the source of poisoning to a cool, well-ventilated area and keep him/her calm and reassured.
- **Eye contact:** Wash eyes with clean, running water for at least 20 minutes while holding eyelid(s) open. If irritation persists get medical attention immediately.
- **Skin contact:** Remove contaminated clothing. Wash contaminated areas with soap and water. If irritation persists get medical attention immediately.
- **Ingestion:** Do not induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration. Do not apply mouth-to-mouth respiration.
- **Never** give anything by mouth to an unconscious person.
- Take the patient immediately to the nearest physician and show this label to him/her.

RESISTANCE WARNING

SONNEBLOM PLUS is of the **Group Code 2 herbicides**, belonging to the **Imidazolinone group of herbicides**.

The product has the acetolactate-synthase (ALS) inhibitor mode of action. In any weed population there are certain weed biotypes that are naturally resistant to herbicides with specific modes of action. The repeated and possibly uninterrupted use of herbicides with the same mode of action, cause these naturally occurring biotypes to become dominant in numbers over time. These resistant weeds are not controlled and the result is experienced as poor weed control, although the herbicide may have been applied at the correct dosage rate and timing. This is also true for **SONNEBLOM PLUS** and other ALS-inhibiting herbicides. Therefore, the registration holder cannot be held responsible for poor control of such resistant weeds, or any losses that may result from the use of **SONNEBLOM PLUS**.

The following actions are recommended to delay the selection of resistant weeds:

- It is important to understand and know the modes of action of the different herbicides available.
- Apply only one application of **SONNEBLOM PLUS** per season.
- If any further herbicide applications are required during this season on this land, use herbicides with a different mode of action.

USE RESTRICTIONS

- **SONNEBLOM PLUS** can only be used on **Imidazolinone-tolerant sunflower** hybrids.
Non **Imidazolinone** tolerant sunflower will die if treated with **SONNEBLOM PLUS**.
- Avoid the application of **SONNEBLOM PLUS** to soils with pH (KCl) below 4.5 or above 7.2.
- Avoid overlaps when spraying.
- **DO NOT** use any additional wetters, spreaders or other adjuvants as **SONNEBLOM PLUS** has already been formulated with optimized amounts of surfactants. The only exception is the addition of **Ammonium sulphate 500g/l SL** or other equivalent alternative, see under “**General information**” below.
- **Do not** apply when wind velocity exceeds 15 km per hour, when temperature inversion conditions exist or when the spray mist may drift onto sensitive crops. Ideally a buffer zone should be established between the area to be sprayed and sensitive crops.
- Sensitive crops include, but are not limited to vegetable crops, cereal and other grain crops and sunflower varieties other than **Imidazolinone-tolerant sunflower**.
- To avoid possible damage to follow-up crops, the following waiting periods should be taken into consideration after the application of **SONNEBLOM PLUS**. A test planting is nevertheless recommended.

CROP:	WAITING PERIOD:
a) Imidazolinone tolerant sunflower	None
b) Wheat	4 months
c) Maize [All maize producing areas (including irrigation)]	10 months
d) All other crops	20 months

NOTE:

The above-mentioned waiting periods will only be valid if the correct quantity **SONNEBLOM PLUS** has been applied and an average or above average rainfall (with a minimum of 350 mm) between application and planting of the following crop has been recorded. When the minimum rainfall, as indicated above, has not been recorded for the season of application, extend the period above by an extra 12 months. Consult the supplier in the event of any uncertainty.

DIRECTIONS FOR USE: Use only as directed.

General information:

- The “**Imidazolinone-tolerant sunflowers**” are not GMO’s.
- The mode of action of **SONNEBLOM PLUS** involves the uptake by the plant foliage, which is followed by translocation to the growth points. After **SONNEBLOM PLUS** application, susceptible weeds may show yellowing and weed growth will stop. Susceptible weeds stop growing and either die or are not competitive with the crop.
- **SONNEBLOM PLUS** must only be applied to **Imidazolinone-tolerant sunflowers** after the 2-leaf stage of the crop (ideally at four leaves). However, **do not** apply when the leaf canopy of the crop is too large as this could intercept the spray and prevent the herbicide from reaching the targeted weeds.
- Application should be completed by 32 days after planting.
- The weeds must be between the 2- and 6-leaf stage at application and must be actively growing. They should not be under stress (e.g., drought, waterlogged or nutrient imbalances) during application, as this can limit the uptake and translocation of the product, resulting in poor weed control.
- Adequate soil moisture is important for optimum **SONNEBLOM PLUS** activity.
- In regions where water quality is known to be poor, **Ammonium sulphate 500g/ℓ SL** or other equivalent alternative can be used to ameliorate the water before adding **SONNEBLOM PLUS**.
Use **Ammonium sulphate 500g/ℓ SL** or other equivalent alternative at a 2 % dilution (see applicable label).
- Ensure thorough coverage and wetting of the weeds.

Important:

- **Only one (1) application of SONNEBLOM PLUS may be made per growing season.** In the situation where **Imidazolinone-tolerant sunflowers** are replanted for any reason and where **SONNEBLOM PLUS** was applied to the first planting, **DO NOT** re-apply **SONNEBLOM PLUS** to the second planting! A shallow cultivation of the soil to no deeper than 5 cm is suggested, so that the option of a pre-emergent grass herbicide can be used at re-planting (refer to the appropriate labels for full recommendations).
- A transient yellowing of crop plants (so-called “yellow flash”), or shortening of the internodes, may occur 5 to 8 days following a **SONNEBLOM PLUS** application. However, no adverse effects on yield will occur.
- These effects can be more pronounced if **Ammonium sulphate 500g/ℓ SL** or other equivalent alternative has been included in the tank mixture and if crops are growing under stressful environmental conditions. Therefore, ensure that the best agronomic practices are followed including soil preparation, adequate fertilization and disease control in the seedling phase.

Compatibility:

SONNEBLOM PLUS is compatible with **Ammonium sulphate 500g/ℓ SL** or other equivalent alternative.

Do not mix SONNEBLOM PLUS with any organophosphate or carbamate insecticides.

MIXING INSTRUCTIONS:

- Three-quarter fill the spray tank with clean water. Measure the required volume of **SONNEBLOM PLUS** and pre-mix this with at least 10ℓ water before adding to the spray tank. If any other product is to be mixed with **SONNEBLOM PLUS** pre-mix the required volume of product in similar fashion. Agitate the water in the spray tank and, if necessary, add **Ammonium sulphate 500g/ℓ SL** or other equivalent alternative first, allowing for sufficient mixing before adding the **SONNEBLOM PLUS**. Fill the spray tank with water to the required level while maintaining agitation, to ensure thorough mixing of the spray mixture before spraying commences. Maintain agitation while spraying. The prepared spray mixture must not be left in the spray tank for any length of time, e.g., overnight.
- All spray applications must be made with suitable equipment that is in good working order and correctly calibrated to give the desired coverage for that particular method of application.

CROP CAN BE USED: Imidazolinone-tolerant sunflowers

DOSAGE: 2ℓ / HA

DIRECTIONS FOR APPLICATION:

- **SONNEBLOM PLUS SHOULD ALWAYS BE PART OF A PROGRAMME APPLICATION.** Always start the programme by using a **pre-emergent** grass herbicide, namely **KAPLYN (L 9971) (S-metolachlor)**;
- **Post-emergent** application **SONNEBLOM PLUS** must be applied at the 2 to 6 leaf stage of the weeds. Any grass weeds must be treated before tillering starts.
- The sunflower seedlings must be between the 2– and 6–leaf stages. It is therefore important to apply when most weeds have emerged together with consideration of the crop stage, but **do not** delay application beyond this time as reduced efficacy can be expected for older weeds.
- **THE TIMING OF THIS APPLICATION SHOULD BE COMPLETED BY 32 DAYS AFTER PLANTING.**
- Ground application: Apply **SONNEBLOM PLUS** in 150 to 250 litres water per hectare.
- **Aerial application is not recommended.**

WEEDS CONTROLLED BY SONNEBLOM PLUS WHEN APPLIED FOLLOWING THE USE OF A PRE-EMERGENT GRASS CONTROL PRODUCT NAMELY KAPLYN (S-METOLACHLOR 960 EC):

GRASSES		BROAD LEAVES	
Scientific name	Common name	Scientific name	Common name
<i>Digitaria sanguinalis</i>	Crab finger grass	<i>Amaranthus hybridus</i>	Common pigweed
<i>Dinebra retroflexa</i>	Cat's tail grass	<i>Amaranthus viridus</i>	Slender Amaranthus
<i>Dactyloctenium aegyptium</i>	Crow foot grass	<i>Chenopodium album</i>	White goosefoot
<i>Eleusine indica ss africanum</i>	Goose grass	<i>Chenopodium carinatum</i>	Green goosefoot
		<i>Chenopodium pumilio</i>	Clammy goosefoot
		<i>Commelina benghalensis</i>	Wandering jew
		<i>Convolvulus sagittatus</i>	Bind weed
		<i>Cucumis myriocarpus</i>	Striped wild cucumber
		<i>Datura ferox</i>	Large thorn apple
		<i>Datura stramonium</i>	Common thorn apple
		<i>Euphorbia helioscopia</i>	Umbrella milkweed
		<i>Euphorbia heterophylla</i>	Painted euphorbia
		<i>Hibiscus trionum</i>	Bladder hibiscus
		<i>Portulaca oleracea</i>	Purslane
		<i>Richardia brasiliensis</i>	Mexican Richardia
		<i>Tagetes minuta</i>	Tall khaki weed
		<i>Tribulus terrestris</i>	Devil thorn
		<i>Rumex acetosella</i>	Sheep sorrel
		<i>Citrullus lanatus citroides</i>	Wild watermelon

Also refer to the spectrum of weeds controlled by the pre-emergent grass control herbicides, mentioned above. Weed species such as *Bidens* spp., *Datura* spp., *Tagetes minuta*, *Xanthium strumarium* and some others that germinate erratically, even during the latter part of the season, may not be effectively controlled up to harvest.

SUPPRESSION OF BETWEEN 60 TO 90 % OF THE FOLLOWING WEEDS WILL BE ACHIEVED WITH SONNEBLOM PLUS FOLLOWING THE USE OF THE REGISTERED PRE-EMERGENT GRASS HERBICIDES NAMELY, KAPLYN (S-METOLACHLOR 960 EC):

GRASSES		BROAD LEAVES	
Scientific name	Common name	Scientific name	Common name
<i>Panicum schinzii</i>	Sweet buffalo grass	<i>Acanthospermum hispidum</i>	Upright starbur
		<i>Bidens pilosa</i>	Blackjack
		<i>Bidens formosa</i>	Cosmos
		<i>Crotalaria sphaerocarpa</i>	Wild lucerne
		<i>Ipomoea purpurea</i>	Morning glory
		<i>Schkurhia pinnata</i>	Dwarf marigold
		<i>Xanthium strumarium</i>	Large cockle bur

KAPLYN (L9971) (S-METOLACHLOR 960 EC) is a registered product of **GREEN ISLAND INVESTMENTS (PTY) LTD.**