



syngenta

Reg. No. L10936 Act No. 36 of 1947

An oil dispersion, selective herbicide for the post-emergence control of broadleaf weeds and some grasses including *Sorghum* spp. in maize.



WARNING

Hazard statements: Suspected of damaging the unborn child. Very toxic to aquatic life with long-lasting effects.

Precautionary statements: Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response: If exposed or concerned, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

EMERGENCY TEL NO.:
+27 82 446 8946 (Griffon)

UN 3082

GROUP	27 2	HERBICIDE
-------	---------	-----------

Active Ingredients:
mesotrione..... 75 g ai/ℓ
nicosulfuron..... 30 g ai/ℓ

Product names marked ® or ™, the ALLIANCE FRAME the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company

Registration holder
Syngenta South Africa (Pty) Ltd
Co. Reg. No. 1998/013761/07
Private Bag X 60
HALFWAY HOUSE, 1685
Tel.: +27 11 541 4000

1. WARNINGS:

Hazard statements: Suspected of damaging the unborn child. Very toxic to aquatic life with long-lasting effects.

Withholding periods: Minimum number of days between last application and harvest.

MAIZE..... 28 days

- Poisonous if swallowed or inhaled.
- Avoid contact with skin or eyes. Irritating to skin and may cause skin sensitisation.
- Very toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment.
- **Flammable:** Keep away from heat and flames.
- Store in a cool place.
- Store away from food and feed, fertilisers and other chemicals.
- Keep out of reach of children, uninformed persons and animals.
- When using do not eat, drink, or smoke.
- This material and its container must be disposed of in the prescribed manner.
- Wear suitable protective clothing and gloves.
- Use appropriate containment to avoid environmental contamination.
- **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.
- If the recommended dosage rate and time of application is not according to specified rates and time, crop damage may occur.

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 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

and the environment, or harm to people 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

2. PRECAUTIONS:

Precautionary statements: Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

- Do not breathe vapour or spray mist.
- Avoid any contact of skin, eyes or clothing with concentrate or spray mixture.
- Wash with soap and water after use.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while handling the product, wash hands and face before doing so.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Spray strictly with the wind to prevent prolonged or repeated exposure to the spray mist.
- Wear protective clothing, i.e., for preparation: impermeable gloves, overalls, and eyes/face protection; for application: overalls, hat or cap and solid footwear.
- Do not unclog nozzles, orifices or valves with your mouth or sharp objects.
- Ensure that there is no leak or any other defect in the spraying system.
- While spraying, avoid any contact with the spray solution and do not inhale the spray mist.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Clean applicator after use. Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams and boreholes.
- Thoroughly wash protective equipment and clothing

after use.

- Rinse the empty container three (3) times with a volume of clean water equal to a minimum of 10% of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.
- Do not use the empty container for any other purpose.

First Aid and Medical Treatment:

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or when going for treatment.

- **Skin/clothes contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes.
- **Eye contact:** Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- **Inhalation:** Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- **Ingestion:** Call a poison control center or doctor immediately for treatment advice and show this container or label. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

3. RELEVANT SUBSTANCES:

Chemical name	
mesotrione (ISO)	
Classification	Concentration (% w/w)
Repr. 2; H361d STOT RE 2; H373 (nervous system, eyes) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	≥ 3 - < 10
M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	

4. RESISTANCE MANAGEMENT:

ELUMIS is a systemic herbicide with two (2) different modes of action containing a HPPD inhibitor and an ALS inhibitor. This will eventually result in chlorophyll destruction, inhibition of protein formation and ultimately necrosis of sensitive weeds.

ELUMIS is a group code 27 and 2 herbicide. Any weed population may contain individuals naturally resistant to **ELUMIS** and other group code 27 and 2 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly and exclusively in programs. These resistant weeds may not be controlled by **ELUMIS** or any other group code 27 and 2 herbicides.

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. Refer to individual product labels when alternating products or when using tank mixtures.
- Integrate other control methods (chemical, cultural, biological) into weed control programs.
- Follow a sound crop rotation system wherein different herbicides from different herbicide mode of action classes can be used, e.g., follow glyphosate tolerant maize with conventional soybeans in order to satisfy the requirement for crop rotation and the avoidance of repeated use of glyphosate.
- All cultivation of fields should be done to prevent weeds from flowering and seeding.
- Maintain herbicide use records for each field.
- Prevent movement of resistant weed seeds and vegetative material to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Inspect each land annually in order to identify the development of resistance early.
- Only apply **ELUMIS** once per crop or season.

To avoid the buildup of resistance do not apply this or any other product containing an ALS inhibitor herbicide more than once to any crop. Avoid the use of **ELUMIS** or any other ALS inhibitor herbicide as sole means of grass and broadleaf weed control in successive crops.

5. USE RESTRICTIONS:

- Do not apply **ELUMIS** to sweetcorn, parental lines, popcorn, maize grown for seed production or inbred lines, or cultivars sensitive to nicosulfuron.
- Do not apply **ELUMIS** once a soil insecticide based on organophosphate has been applied.
- Do not apply **ELUMIS** in tank mixtures with organophosphate or carbamate insecticides OR within seven (7) days before or after such insecticides were applied to the leaves of the crop.
- Do not mix with foliar or liquid fertilisers.
- Do not apply **ELUMIS** in sequence or in tankmix with a product containing any other sulfonylurea.
- Under certain conditions, some transient yellowing and/or crop stunting and/or loss of vigour can be seen 1 - 2 weeks after treatment (V2 - V8 of maize). This is quickly outgrown and no yield effect has been shown.
- Applications should not be made to any maize crop that is under stress as this may lead to incidences of more persistent crop damage.
- Do not exceed the recommended dose rate of **ELUMIS**.
- Due to its high level of activity, care must be taken to avoid spray drift onto plants outside the target area.
- Do not enter treated areas before spray deposit on leaf surfaces has dried, unless protective clothing is worn.
- Store **ELUMIS** under cool and dark conditions.

6. DIRECTIONS FOR USE: Use only as indicated.

- Apply **ELUMIS** only once per crop season.
- Apply **ELUMIS** as a post-emergence herbicide after the emergence of both the weed and crop, but not later than BBCH 14 - 16 of maize (V4 - V6 leaves).
- Weeds should not be under any stress and must be

actively growing. Weeds should be between the true fourth and sixth leaf stage for optimum control.

- Forage maize and grain maize can be re-seeded immediately in case of crop failure. Ploughing is recommended prior to re-seeding. Some slight chlorosis/yellowing may be seen soon after emergence, but these are usually transitory in nature.

6.1 Rotational Crops

Minimum waiting periods:

CEREALS, SOYBEANS, DRY BEANS, SUNFLOWERS..... 9 - 12 months
SORGHUM AND ALL OTHER CROPS..... 12 - 24 months

The waiting period for other crops should be carefully followed because sensitive crops such as sunflower may require a substantial waiting period depending on preceding rainfall conditions.

6.2 Compatibility

ELUMIS should not be tank mixed with organophosphate insecticides.

6.3 Mixing Instructions

- Ensure that the sprayer is in good condition and set to give an even application at the correct volume.
- Fill the spray tank with half the required volume of clean water and start agitation.
- Measure the required quantity of the product and mix it thoroughly with water in a separate can.
- Pour the content in the sprayer, mix well and then complete filling the tank with water.

Ensure thorough agitation of the mixture in the tank during mixing and spraying.

Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank.

6.4 Application Techniques

- **ELUMIS** may be applied with any medium or high-volume sprayer equipped with an efficient agitation mechanism.
- All spray equipment must be properly calibrated and fitted with nozzles that deliver the correct volume of spray mixture, in order to reach the spray target while covering the target evenly with droplets.
- For optimal control a water volume of at least 200 - 300 ℓ/ha should be used.
- Where drift is a problem do not exceed 2 bar. Use only the pressures recommended for specific nozzles to avoid drift.
- Apply **ELUMIS** only to young, actively growing weeds during favourable climatic conditions.
- Overshadowing of weeds may result in variable control due to insufficient coverage. When timing the application of **ELUMIS** this aspect must be considered.
- Weeds which have not germinated at the time of application will not be controlled.

- Take particular care to avoid overlapping of spray swaths.
- Do not apply this product through any type of irrigation system.
- Ensure spraying equipment is thoroughly washed out according to specific instructions after use.

6.5 Application Rates

TABLE 1: THE APPLICATION RATES OF ELUMIS ON MAIZE

Crop	Dosage (ℓ/ha)	Application timing
Maize (excluding seed maize, parental lines, sweetcorn and popcorn)	1.3 - 1.7	Apply between the V2 - V6 true leaf stages of maize (BBCH 12 - 16). Apply early post-emergence of weeds but not later than the 4 th - 6 th true leaf stage of the weeds.
Remarks Some temporary yellowing and/or crop stunting and/or loss of vigour can be seen 1 - 2 weeks after treatment depending on crop sensitivity and climatic conditions.		

TABLE 2: WEEDS CONTROLLED BY ELUMIS

Annual broadleaf weeds	Common name
<i>Amaranthus deflexus</i> <i>Amaranthus spinosus</i> <i>Amaranthus thunbergii</i> <i>Chenopodium carinatum</i> <i>Cleome monophylla</i> <i>Datura ferax</i> <i>Datura stramonium</i> <i>Schkuhria pinnata</i> <i>Tagetes minuta</i> <i>Tribulus terrestris</i> <i>Xanthium strumarium</i>	perennial pigweed thorny pigweed red pigweed green goosefoot spindlepod large thorn apple thorn apple dwarf marigold khakiweed devil's thorn cocklebur
Sorghum species	Common name
<i>Sorghum bicolor</i> subsp <i>arundinaceum</i> <i>Sorghum bicolor</i> subsp <i>drummondii</i> <i>Sorghum halepense</i>	common wild sorghum wild sorghum Johnson grass
Grass species	Common name
<i>Panicum schinzii</i> <i>Rottboelia cochinchinensis</i> <i>Setaria pallide-fusca</i>	sweet buffalo grass guinea fowl grass red bristle grass
Suppression only	Common name
<i>Eleusine indica</i> <i>Portulaca oleracea</i>	goosegrass Purslane

ELUMIS® is a registered trade mark of a SYNGENTA Group Company.

© SYNGENTA AG, 2000. Copyright of this document is reserved. All unauthorised reproduction is forbidden.