

SAFETY PRECAUTIONS

- Wear goggles and rubber gloves when handling the concentrate.
- Avoid inhalation of fumes.
- Avoid eye and skin contact.
- Wash contaminated clothes after use.
- Wash with soap and water after use and after accidental skin contact.
- In case of eye contact, rinse immediately with plenty of water.
- Do not use close to fishponds, fish tanks and aquaria.
- Do not eat, drink or smoke whilst mixing, applying, or before washing hands and face or change of clothing.
- Thoroughly clean the applicator directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Containers must be completely empty before being disposed of.
- TRIPLE RINSE: Empty containers in the following manner: Invert 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 third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy empty container by perforation and flattening.

WARNINGS

- **Minimum time between the last application and harvest:**
Tobacco.....28 days
- Handle with care.
- Harmful if swallowed or inhaled.
- Toxic to fish.
- May cause moderate skin and severe eye irritation.
- Store under lock and key in a cool place.
- Store away from food, feeds, seed, fertilizers and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.
- May be dangerous to wild animals, birds, fish, bees and other animals.
- If knapsack sprayers are used for application, the operator must use a respirator to prevent inhalation of the spray.
- Flammable - do not spray near open flames.
- Re-entry: do not enter treated area within 1 day after treatment unless wearing protective clothing.
- In case of poisoning call a doctor and make this label available to him/her.
- Never re-use it for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

SYMPTOMS OF HUMAN POISONING

Serious eye irritation, moderate skin irritation.

FIRST AID MEASURES AND PRECAUTIONS

- **Inhalation:** Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Avoid unprotected mouth-to-mouth resuscitation. Treat symptomatically and supportively.
- **Skin contact:** If irritation occurs, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap for 15 to 20 minutes. If irritation persists, seek medical advice immediately.
- **Eye contact:** Immediately flush eyes with gently flowing water for 15 minutes, holding the eyelids open. Seek immediate medical attention.
- **Ingestion:** In case of ingestion, **do not induce vomiting, or give fluids if person is unconscious or having convulsions.** Seek medical advice immediately.
- **ADVICE TO PHYSICIAN**
- There is no specific antidote. Treat symptomatically. Probable mucosal damage may contraindicate gastric lavage. Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Date of Manufacture: June 2020

Batch No.: 20200620

Manufactured by:

NOVA AGRO (HK) LTD
6TH FLOOR, WYNDHAM PLACE,
44 WYNDHAM STREET,
CENTRAL HONG KONG

FLUMETRALIN DUO EC

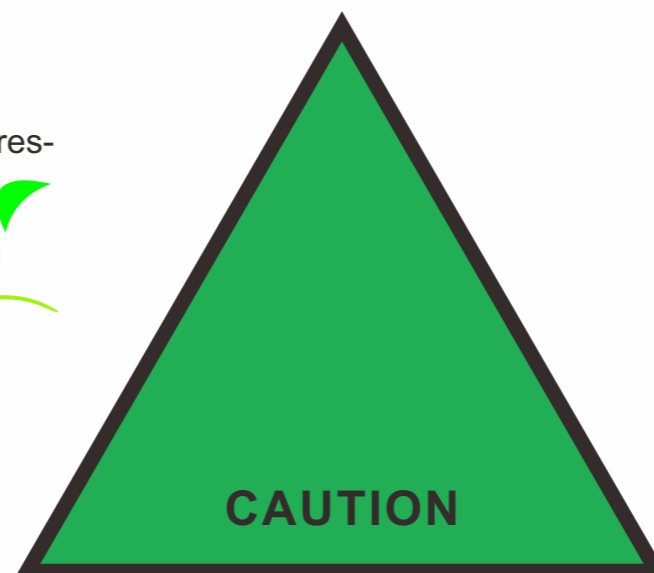
PLANT GROWTH REGULATOR

Reg. No.:
TRB. No.:

NET VOLUME: 5L

An emulsifiable concentrate locally systemic and contact plant growth regulator for the control of suckers on flue-cured and burley tobacco.

Supplied by Maguires-



HARMFUL IF SWALLOWED

Composition**mass/vol.**

Flumetralin.....135 g/L
n-Decanol.....300 g/L

Chemical groups:

Dinitroaniline/alcohol

KEEP OUT OF REACH OF CHILDREN

PLANT GROWTH REGULATOR FOR AGRICULTURAL USE

TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

- Do not mix FLUMETRALIN DUO EC with other chemicals or apply to plants which have recently been treated with insecticides and/or herbicides.

Mixing instructions:

- Agitation must be continued throughout the mixing and application operation.
- Prepared mixture must not be left in the applicator for any length of time, e.g. overnight.

General instructions:

- Top plants low enough, to ensure all the leaves are unfolded.
- During topping remove all suckers which exceed 2cm by hand as poor control of suckers larger than 2cm may be obtained.

Time of Application:

- Apply FLUMETRALIN DUO EC immediately after topping (within 24 hours) when most tobacco plants are in the elongated button to early flower stage.
- Plants must be upright to ensure that the product flows into each leaf axil.
- Do not allow the emulsion to collect down at the base of the plant.
- Rain occurring within two (2) hours after application may reduce effectiveness.
- Compatibility:
- Do not mix FLUMETRALIN DUO EC with other chemicals or apply to plants which have recently been treated with insecticides and/or herbicides.
- Mixing instructions:
- Agitation must be continued throughout the mixing and application operation.
- Prepared mixture must not be left in the applicator for any length of time, e.g. overnight.
- **General instructions:**
- Top plants low enough, to ensure all the leaves are unfolded.
- During topping remove all suckers which exceed 2cm by hand as poor control of suckers larger than 2cm may be obtained.

APPLICATION RATES

CROP/PEST	DILUTION	QUANTITY PER PLANT	REMARKS
Tobacco Sucker control of flue and air cured tobacco	16.5 ml / 1L water	8.8 ml / plant	Remove all suckers exceeding 20mm before application. Depending on height, thickness and external morphology of main stem of tobacco plants, the required amount per plant may be lower or higher than 8ml. Repeat application 7 days later.

WARRANTY:

The excellent results which this chemical should normally yield, are not however warranted or guaranteed, as efficacy can be greatly influenced by factors outside the control of either the manufacturers or the suppliers. No warranty whatsoever, express or implied, is therefore given concerning the performance or efficacy of this chemical and responsibility is specifically excluded for any damage, injury or loss of any kind during or resulting from its handling, use or storage, whether or not such has been in accordance with directions.

This product is warranted to consist of the ingredients shown on the label.

SHELF LIFE: A minimum of 2 years under cool, constant conditions.



1. Triple rinse clean container after use.
2. Puncture holes in bottom.
3. Return to Maguires recycling facility/or-Return to your nearest recycling facility.

Registration held by:

MAGCHEM (PVT) LIMITED
2274 TILBURY ROAD,
WORKINGTON, HARARE,
ZIMBABWE

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product name **FLUMETRALIN DUO EC**
Common name Flumetralin + n-Decanol
Chemical name *N*-(2-chloro-6-fluorobenzyl)-*N*-ethyl- α,α,α -trifluoro-2,6-dinitro-*p*-toluidine + decan-1-ol

Supplier **NOVA AGRO (HK) LIMITED**
(Reg. No. 1023146)
6th Floor Wyndham Place
44 Wyndham Street
CENTRAL HONG KONG.

Emergency Tel/Fax +27(0) 83 676 1998

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: Flumetralin + n-Decanol

Chemical name: *N*-(2-chloro-6-fluorobenzyl)-*N*-ethyl- α,α,α -trifluoro-2,6-dinitro-*p*-toluidine + decan-1-ol (IUPAC)

CAS number: [62924-70-3] / 37909-25-4

Chemical class: 2,6-Dinitroaniline / fatty alcohol

Chemical formula: C₁₆H₁₂ClF₄N₃O₄ / C₁₀H₂₂O

Use: An emulsifiable concentrate locally systemic and contact plant growth regulator for the control of suckers on flue-cured and burley tobacco.

Formulation: Emulsifiable concentrate (EC)

Hazardous ingredients of toxicological concern:

Ingredient: Concern: present: Flumetralin (irritant) 135g/l
n-Decanol (irritant) 300g/l

Harmful if inhaled. Severe eye irritant. Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. **Flammable.**

Symbols: F, Xn, Xi

Risk-phrase(s): R 20/22, R 36/37/38, R 41, R 50/53

3. HAZARDS IDENTIFICATION

Toxicity class: WHO II.

Likely routes of exposure: Eye contact, skin contact, ingestion, and inhalation.

Eye contact: Severe eye irritation.

Skin contact: Moderate skin irritation.

Skin sensitization: Skin sensitizer

Ingestion: May be harmful if swallowed.

4. FIRST AID MEASURES

Inhalation: Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Avoid unprotected mouth-to-mouth resuscitation. Treat symptomatically and supportively.

Skin contact: If irritation occurs, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap for 15 – 20 minutes. If irritation persists, seek medical advice immediately.

Eye contact: Immediately flush eyes with gently flowing water for 15 minutes, holding the eyelids open. Seek immediate medical attention.

Ingestion: In case of ingestion, **do not induce vomiting, or give fluids if person is unconscious or having convulsions.** Seek medical advice immediately.

Advice to physicians: There is no specific antidote. Treat symptomatically. Probable mucosal damage may contraindicate gastric lavage. Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

5. FIRE FIGHTING MEASURES

Fire and explosion hazard: The product is **Flammable.** Vapour air mixtures may be explosive. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing media: Carbon dioxide, water, dry chemical and foam.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove all sources of flame and sparks. Avoid contact with skin and eyes. Do not inhale fumes. For personal protection see Section 8.

Environmental precautions: Do not allow entering drains or watercourses. When the product contaminates public waters, inform appropriate authorities in accordance with local regulations.

Occupational spill: Remove all sources of ignition. For small liquid spills, soak up with sand or other suitable non-combustible absorbent material, and place into containers for subsequent disposal. For large spills, contain liquid far ahead of spill. Contain spillage and contaminated water for subsequent disposal. Do not flush spilled material into drains. Keep spectators away.

7. HANDLING AND STORAGE

Handling: Do not operate near sources of ignition. Harmful by inhalation or if swallowed. Avoid contact with eyes, prolonged contact with skin, and inhalation of fumes. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the herbicide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to

intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Store in its original labelled container in shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children and animals. Local regulations should be complied with.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

Respirator: An approved respirator suitable for protection from dusts and mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Gloves: Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.

Eye protection: The use of safety goggles is recommended.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Orange-yellow liquid.

Odour: Aromatic solvent.

Density: 1.00 g/ml (20°C).

pH: 5.0 to 8.0 (1% aqueous dilution).

Flammability: Flammable.

Solubility in water: Soluble.

10. STABILITY AND REACTIVITY

Storage stability: Stable for up to 2 years under normal storage conditions.

Dilution stability: Stable in aqueous solutions.

Hazardous Polymerization: Will not occur

Conditions to avoid: Avoid extreme heat, flame, ignition sources and oxidizing materials.

Materials to avoid: Avoid contact with strong oxidizers.

Mildly corrosive to steel and tinplate.

Hazardous decomposition products: Will evolve toxic and irritant vapours.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀: >2000 mg/kg.

Acute dermal LD₅₀: >5000 mg/kg.

Inhalation LC₅₀: >2.0 mg/l (4 h).

Acute skin irritation: Moderate irritant.

Acute eye irritation: Severe irritant.

Skin sensitization: Sensitizer.

Carcinogenicity: Long-term animal studies did not detect carcinogenic activity. No human information is available.

Teratogenicity: Studies did not detect teratogenic activity. No human information available.

Mutagenicity: Studies did not detect mutagenic activity. No human information available.

12. ECOLOGICAL INFORMATION

Degradability: In plants: Metabolism in tobacco is rapid and extensive; reduction or complete removal of substituents occurs.

ECOTOXICOLOGY (*Flumetralin technical material*):

Birds: Oral LD₅₀: Mallard ducklings >2000 mg/kg

Oral LD₅₀: Bobwhite quail >2000 mg/kg

Fish: LC₅₀ (96 h) bluegill sunfish 23 µg/l

Bees: *Non-toxic to bees.*

LD₅₀: (48 h) >300 µg/bee (oral) > 100 µg/bee (contact)

Daphnia: EC₅₀: (48 h) >160 µg/l

Algae: LC₅₀: (72 h) Selastrum >0.85 mg/l

13. DISPOSAL CONSIDERATIONS

Pesticide disposal: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product that cannot be reused or reprocessed should be disposed of in a landfill approved for pesticide disposal. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Package product wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards. **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining 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 a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container.

Destroy the emptied containers by perforation and flattening. Bury in an approved dump site. Do not re-use the empty container for any other purpose.

14. TRANSPORT INFORMATION**UN No.: 1993****Road Transport ADR/IRD:**

Class: 3.3

Packing group: III

Shipping name: **Flammable Liquid N.O.S.****Air Transport ICAO/IATA:**

Class: 3.3

Packing group: III

Shipping name: **Flammable Liquid N.O.S.****Maritime Transport IMDG/IMO:**

Class: 3.3

Packing group: III

Shipping name: **Flammable Liquid N.O.S.****MARINE POLLUTANT.****15. REGULATORY INFORMATION****Symbol:** F, Xi, Xn**Indication of danger:** **Flammable**, Irritating substance.**Risk phrases:****R2** Risk of explosion by shock, friction, fire or other sources of ignition.**R10 Flammable.****R16** Explosive when mixed with oxidising substances.**R20/22** Harmful by inhalation and if swallowed.**R36/37/38** Irritating to eyes / respiratory system / skin.**R41** Risk of serious damage to eyes.**R43** May cause sensitization by skin contact.**R50/53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**Safety phrases:****S2** Keep out of reach of children.**S13** Keep away from food, drink, and animal feedstuffs.**S20/21** When using do not eat, drink or smoke.**S23** Do not breathe vapour or spray.**S36** Wear suitable protective clothing.**S37** Wear suitable gloves.**S45** In case of accident or if you feel unwell, seek medical advice immediately.**16. OTHER INFORMATION**

PACKING AND LABELLING

Packed in fluorinated 1, 2, 5, 10 and 20 litre plastic containers and labelled according to South African regulations and guidelines.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.
