

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product name FLUMETRALIN DUO EC
Common name Flumetralin 13.5% + n-Decanol 30% EC
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 13.5% + n-Decanol 30% EC

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: Light-yellow transparent liquid.

Odour: Aromatic solvent.

Density: 0.93 g/ml (20°C).

pH: 6.0 (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

Packing group: III

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

Class: 3

Packing group: III

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

Class: 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.
