NICOSULFURON 750 WDG

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: NICOSULFURON 750 WDG
Herbicide

UN No.: 3077

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
PO Box 801, Kempton Park, 1620, South Africa

Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone: +27 11 396 2233
(08:00 – 16:30)

24 Hr Emergency Numbers:
Bateleur: +27 83 1233 911 or
(Client: Villa Crop Protection) +27 860 333 911

In case of Poisoning:
Western Cape Poisons Tel. Service +27 861 555 777
Griffon Poison Information Centre +27 82 446 8946
Tygerberg Hospital +27 21 931 6129

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name: Nicosulfuron
Chemical Name: 2-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-N,N-dimethylnicotinamide; 1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-dimethylcarbamoyl-2-pyridylsulfonyl)urea (IUPAC)
CAS No.: [111991-09-4]
Chemical Family: sulfonyleurea
Chemical Formula: C_{13}H_{18}N_6O_6S
Use: Selective systemic herbicide, absorbed by the foliage and roots, with rapid translocation in xylem and phloem to the meristematic tissues.

Formulation: Nicosulfuron 750 g/kg
Water Dispersible Granule

Hazardous Ingredient: Nicosulfuron / sulfonyleurea
Symbol: Xi, Xn
Indication of danger: Irritating and harmful substance
Risk phrases: R 20/22, R 36/37/38

3. HAZARD IDENTIFICATION

Major Health Hazard:
No major health hazard is known.

Inhalation:
Harmful. Avoid inhalation of spray mist. Long-term inhalation of nuisance dust may overload lung clearance mechanism.

Eye:
The product may cause moderate irritation. Avoid contact with eyes.

Skin:
Avoid contact with skin. Harmful if absorbed through skin.

Swallowed:
Based on animal data, repeated ingestion of high doses of NICOSULFURON 750 WDG may cause reduced white blood cell production.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation:
Harmful. Avoid inhalation of spray mist. Long-term inhalation of nuisance dust may overload lung clearance mechanism. If vapours or mists have been inhaled, remove the source of contamination or move victim to fresh air. Obtain medical attention immediately.

Skin contact:
Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. Obtain medical attention if irritation persists.

Eye contact:
Immediately flush the eyes with clean, gently flowing water for at least 15 - 20 minutes, holding the eyelid(s) open. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye(s). Obtain medical attention if irritation persists.

Ingestion:
Obtain medical attention immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told so to do by the poison control centre or doctor. Do not give anything by mouth to an unconscious person.

Advice on treatment:
Have the product container or label with you when calling a poison control centre or doctor. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Fire and explosion hazard:
Not flammable.

No risk of an explosion from this product under normal circumstances when involved in a fire.

Hazardous products of combustion:
None.

Extinguishing agents:
Extinguish fires with carbon dioxide, dry powder, water or foam. Avoid the accumulation of polluted run-off from the site.
**MATERIAL SAFETY DATA SHEET**

**NICOSULFURON 750 WDG**

**Fire fighting:**
Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a water spray, CO₂ dry chemical and foam-extinguishing agent for the type of surrounding fire. If area is exposed to fire and conditions permit, let fire burn itself out. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Burning chemicals may produce by-products more toxic than the original material. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid pollution of waterways. Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

**Personal protective equipment:**
If product is on fire, wear self-contained breathing apparatus and full protective equipment. Do not breathe fumes from burning material. Keep upwind.

**6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)**

**Personal precautions:**
Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

**Environmental precautions:**
Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs. Considered as Marine Pollutant.

**Occupational spill:**
For dry spills, shovel up and sweep up with damp earth or sand or other suitable absorbents, taking care not to raise a dust cloud. Place the material into a labelled, clean, dry container and store in a safe place to await proper disposal. All contaminated cleaning materials should be placed in closable receptacles. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Do not contaminate water while cleaning equipment or disposing of wastes. Keep spectators away and upwind.

**7. HANDLING AND STORAGE REQUIREMENTS**

**Handling:**
This is a water-dispersible product. It may be packaged in a pre-measured water-soluble packet, which readily dissolves in water. Exposure to moisture or excessive handling of the soluble packets will cause them to break.

**8. EXPOSURE CONTROL / 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 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: Off-white homogeneous granule with no extraneous material.
Odour: Odourless.
Flammability: Not Flammable
Flash point: 141 – 144 0C.
Vapour pressure: <7.5 x 10^-5 Pa (110 0C)
P: Fresh sample: 5.90. Aged 5.95.
Explosivity: Not explosive
Solubility in water: Dispersible. 3.6 g/l at pH 5; 12.2 g/l at pH 7; 39.2 g/l at pH 9 @ 250C.
Solubility in other solvents: In acetone 18, ethanol 4.5, chloroform, dimethylformamide 64, acetonitrile 23, toluene 0.370, hexane <0.02, dichloromethane 160 (all in g/kg, 25 0C).

10. STABILITY AND REACTIVITY

Stability: Stable for 2 years under normal conditions.
Conditions and Materials to Avoid: None.
Instability: Not known.

11. TOXICOLOGICAL INFORMATION

Acute oral LD50: Formulation calculated: > 5000 mg/kg (Very low toxicity).
Acute dermal LD50: Formulation calculated: > 2000 mg/kg (Slight to moderate toxicity).
Inhalation: Formulation: LC50 in rats: > 5.6 mg/l (4 hours) (Very low toxicity).
Acute skin irritation: Formulation: Moderate irritant.
Acute eye irritation: Formulation: Moderate irritant.
Chronic toxicity: No adverse effects were noted up to 30 mg/kg in 28-day feeding trials to mice and rats.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation: In plants, (maize) Nicosulfuron is rapidly degraded. DT50 is approximately 1.5 to 4.5 days. Hydrolysis of the sulfonylurea bridge to form the pyridine sulfonamide and pyrimidine amine, and hydroxylation on the pyrimidine ring, are the main metabolic pathways. Biodegradation is an important degradation mechanism for Nicosulfuron in soil. The half-life of Nicosulfuron in a silt clay soil is 26 days. However, anaerobic conditions slow down the degradation process. The half-life of Nicosulfuron in silt clay soil/water is 63 days. The main degradates are pyridine sulfonamide and pyrimidine amine.

ECOTOXICOLOGY: Nicosulfuron is slightly toxic to birds on an acute and dietary basis. It is practically non-toxic to fish, invertebrates and honey bees.

Birds:
Oral LD50: Quail: > 2250 mg/kg
Fish:
LC50 (96 hours): Bluegill sunfish: > 1000 mg/l
Rainbow trout: > 1000 mg/l
Bees:
LD50 (contact) > 20 µg/bee
Daphnia:
LC50 (48 hours): > 100 mg/l
Algae:
NOEC (96h): 100 mg/l
Earthworms:
LC50 (14 days): > 1000 mg/kg soil

13. DISPOSAL CONSIDERATION

Pesticide and container disposal: Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public
sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

Empty the container of excess product into the mixing tank or spray tank of the applicator. Destroy the emptied containers by perforation and flattening. Bury in an approved dumpsite. Do not re-use the empty container for any other purpose. Comply with any local legislation applying to disposal.

Prevent contamination of food, feedstuffs, drinking water and eating utensils.

14. TRANSPORT INFORMATION

UN NUMBER: 3077
Road Transport ADR/RID:
Class: 9
Packaging group: III
Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (sulfonylurea / Nicosulfuron 750 g/kg)

Maritime Transport IMDG/IMO:
Class: 9
Packaging group: III
Shipping name: Environmentally Hazardous Substance, Solid, N.O.S (sulfonylurea / Nicosulfuron 750 g/kg)

15. REGULATORY INFORMATION

Symbol: Xi, Xn
Indication of danger: Irritant, Harmful

Risk phrase(s):
R 21/22 Harmful in contact with skin and if swallowed.
R 36/38 Irritating to eyes and skin.

Safety phrases:
S 2 Keep out of the reach of children.
S 13 Keep away from food, drink and animal feeding stuffs.
S 23 Do not breathe vapour/spray.
S 24/25 Avoid contact with skin and eyes.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16. OTHER INFORMATION

Packaging:
Packed in 1, 5, 10, 12, 15, 20, 25 and 50 kg plastic containers and bags, 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 neither the product nor where instructions or recommendations are not followed.

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

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