

UNIVERSAL UNIRON 200 GR

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: UNIRON 200 GR
 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 numbers:

24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918
 (Hazcall24) +27 86 044 4411
 (Client: Villa Crop Protection)
 Griffon Poison Information Centre +27 82 446 8946
 (Client: Villa Crop Protection)

Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946
 Poisons Information Centre +27 861 555 777

Villa Crop Protection Emergency number:

National Safety, Health and Environmental Manager:
 +27 63 698 0668

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name: Tebuthiuron
Chemical Name: 1-(5-tert-butyl-1,3,4-thiadiazol-2-yl)-1,3-dimethylurea. **IUPAC)**
CAS No.: [34014-18-1]
Chemical Family: urea
Chemical Formula: C₉H₁₆N₄OS [Mol. wt.: 228.3
Formulation: Tebuthiuron 200 GR
 Granule
Use / Mode of Action: Systemic soil herbicide with low selectivity, absorbed mainly by the roots, with ready translocation.

Hazardous Ingredient:

Tebuthiuron ±22 %
 Inerts ± 80 %

SYMBOLS: N, X_i, X_n

RISK-PHRASE(S): R 20/21/22, R 36/37, R 52/53

3. HAZARD IDENTIFICATION

Toxicity class: WHO III. Slightly hazardous.

Likely routes of exposure: **Skin:** Mild skin irritant.

Eye: May cause mild eye irritation. **Inhalation:** At room temperature, vapours are minimal due to physical properties; a single exposure is not likely to be hazardous. **Swallowed:** The product is harmful if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: Immediately remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Avoid mouth-to-mouth resuscitation. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Seek medical advice immediately.

Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if necessary.

Eye contact: Flush eyes immediately with large amounts of gently flowing cold water or normal saline solution, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, get medical attention.

Ingestion: Have victim rinse mouth thoroughly with water. Do not induce vomiting, due to the aromatic solvent. If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person. Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen. Qualified medical personnel should perform administration of gastric lavage or oxygen. **Seek medical advice immediately.**

Advice to physician: Keep patient prone and quiet. Start artificial respiration immediately; if patient is breathing never give anything by mouth to an unconscious person. In serious cases, medical attention should be sought.

5. FIRE FIGHTING MEASURES

Flammability: Non-Flammable.

Flash point: Not applicable.

Fire/Explosion hazard: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing agents: Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting

UNIVERSAL UNIRON 200 GR

MATERIAL SAFETY DATA SHEET

for later disposal. Avoid the accumulation of polluted run-off from the site.

Firefighting: Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

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.

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.

Dyke fire control water for later disposal. Do not scatter the material. 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: Fire may produce irritating or poisonous vapours or gases (oxides of chlorine and sulphur) or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES (Spillage)

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

Environmental precautions: Do not apply on directly to water, to areas where surface water is present or to intertidal areas below the mean mark. Do not contaminate water by disposal of equipment washwaters. See "Storage, shipment and Disposal" section. In case of spills properly dispose of contaminated materials.

Occupational spill: Do not touch-spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

Open burning or dumping of this material is prohibited. Do not get water inside containers.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Harmful if swallowed. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Seek medical advice.

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.

Worker should shower at the end of each work day. Launder all clothing before it is re-used again.

Storage: Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

Storage stability: Stable at 54°C.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite 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: Respirator: An approved full-face respirator suitable for protection from spray or mists of pesticides is required. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing; boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

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

Eye protection: The use of chemical resistant goggles or face shield.

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: Columnar granule.

UNIVERSAL UNIRON 200 GR

MATERIAL SAFETY DATA SHEET

Colour: Blue granules.
Odour: Odourless.
Solubility in water: Dispersible.
Flammability: Non-flammable.
Density: 1.82 g/cm³ at 20 °C.
pH: 6.0 to 9.0.
Oxidising property: Not oxidising.
Explosive property: Not explosive.

10. STABILITY AND REACTIVITY

Storage stability: Stable for up to 2 years when stored in a dry, cool covered warehouse in original, well-labelled containers. Store at low temperature conditions, below 54 °C, preferably below 30 °C and not for prolonged periods in direct sunlight.

Condition to avoid: No hazardous reactions known.
Hazardous decomposition: May decompose and release Nitrogen oxides, Sulfur oxides, Carbon oxides (CO & CO₂) and Aniline.
Material to avoid: Not known.
Hazardous Polymerization: Not known.

11. TOXICOLOGICAL INFORMATION

Formulation:
Acute oral LD₅₀: >644 mg/kg.
Acute dermal LD₅₀: >5000 mg/kg.
Acute inhalation LC₅₀: 3.7 mg/l air (4 hours).
Acute skin irritation: Slightly irritant.
Acute eye irritation: Slightly irritant.
Sensitization: Non sensitizer.
NOEL: 50 mg/kg in 90-days rat feeding study; 40 mg/kg in year rat feeding study.
ADI/RfD: 0.20 mg/kg/day based on a two-year rat feeding study (NOEL) 20 mg/kg/day and using 100-fold safety factor.
Teratogenicity: No evidence.
Reproductive toxicity: No evidence.
Toxicity class: WHO III.

12. ECOLOGICAL INFORMATION

In animals: The major metabolites in mammals were formed by N-demethylation of the substituted urea side-chain.

In plants: In plants, the principal metabolic pathways involve N-demethylation and hydroxylation of the tert-butyl side-chain.

In the soil: Some microbial breakdown occurs in soil, but this is not the predominant mode of degradation. Loss due to photodecomposition and volatilisation is negligible. Half-life in soil is considerably greater in soils with low moisture content, and in high organic soils. Adsorption Freundlich K

values range from 0.11 in sand (pH 7.7, o.m. 0.5%) to 1.82 in clay loam (pH 6.9, o.m. 2.0%).

ECOTOXICOLOGY:

Birds: LD₅₀: bobwhite quail and mallard ducks >500 mg/kg

Fish: LC₅₀ (96 h): For rainbow trout 144 mg/l,
 Goldfish and fathead minnows >160 mg/l,
 Bluegill sunfish 112 mg/l

Daphnia: LC₅₀: (48 h): 297 ppm

Bees: LD₅₀ (48 h): >100 µg/bee

Algae: EC₅₀: for Anabaena 4.06ppm, Navicula 0.081ppm, Selenastrum 0.05ppm, Skeletonema 0.05 ppm.

13. DISPOSAL CONSIDERATION

Pesticide 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/bags retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

Empty the container/bag of excess product into the mixing tank or spray tank of the applicator. Destroy the emptied containers/bags by perforation and flattening. Bury in an approved dumpsite. Do not re-use the empty container/bag 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 No.: 3077

Road Transport ADR/IRD:

Class: 9. Packing group: III.
Shipping name: Environmentally hazardous substance, solid, N.O.S.
Tebuthiuron 200 GR

Maritime Transport IMDG/IMO:

Class: 9. Packing group: III.
Shipping name: Environmentally hazardous substance, solid, N.O.S.
Tebuthiuron 200 GR

15. REGULATORY INFORMATION

Symbol: N, Xi, Xn

Indication of danger: Environmentally Dangerous, Irritant and Harmful Substance.

Risk phrases:

UNIVERSAL UNIRON 200 GR

MATERIAL SAFETY DATA SHEET

R 20/21/22	Harmful by inhalation contact with skin and if swallowed.
R 36/37	Irritating to eyes and respiratory system
R 52/53	Harmful to aquatic organisms, may cause long-term adverse effect in the aquatic environment.
Safety phrases:	
S 1/2	Keep locked up and out of the reach of children.
S 3/7/9	Keep container tightly closed in cool, well-ventilated place
S 13	keep away from food, drinks and animal feedingstuffs.
S 15	keep away from heat
S 24/25	Avoid contact with skin and eyes.
S 29/35	Do not empty into drains; dispose of this material and its container in a safe way
S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S 45	In case of an accident or if you feel unwell, seek for medical advice
S 60	This material and its container must be disposed of as hazardous waste.
S 61	Avoid release to the environment. Refer to instructions/ Safety data sheets

16. OTHER INFORMATION

Packing and Labelling: Packed in 500 g, 1, 5, 10, 20, 25, 50 and 100 kg containers and labelled according to the 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.

END OF DOCUMENT

Compiled: October 2015
Reviewed: June 2019
Revision no.: (2)
Next revision date: June 2024

For detailed information on revisions, contact the Registration holder.