

UNIVERSAL DAZIDE ENHANCE™

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: DAZIDE ENHANCE™
 Plant Growth Regulator

UN No.: NR

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

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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: Daminozide

Chemical Name: Daminozide (N-dimethylaminosuccinamic acid) 85 % soluble.

CAS No.: 1596-84-5.

Chemical Family: Plant Growth Regulator.

Chemical Formula: Unknown.

Use: A water-soluble granule formulation for use as a plant growth regulator on ornamental plants as indicated.

Formulation: Daminozide 850 g/kg Soluble Granule.

Hazardous Ingredient: Daminozide

Symbol: None.

Indication of danger: None.

Risk phrases: None.

3. HAZARD IDENTIFICATION

Major Health Hazard: None.

Inhalation: Obtain medical attention.

Eye: Obtain medical attention.

Skin: Obtain medical attention if irritation occurs.

Swallowed: Seek medical advice.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: Avoid inhalation of spray mist. If vapours or mists have been inhaled, remove the source of contamination or move victim to fresh air. Ensure that the victim is warm and comfortable. 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: Remove contaminated clothing. Wash 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, and then continue rinsing eye(s). Obtain medical attention if irritation persists.

Ingestion: Do not induce vomiting or give liquids. Seek medical attention.

Advice on treatment: No specific antidote known. 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: At very high temperatures Daminozide will decompose to form carbon and nitrogen compounds.

Extinguishing agents: Extinguish fires with carbon dioxide, dry powder, water or foam. 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 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. 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.

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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.

Occupational spill: Isolate spilled material for safe disposal and collect in sealable ploy-lined containers. Clean contaminated area with water. 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. Avoid inhalation of spray and vapour and contact with eyes and skin. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. If in contact wash skin thoroughly using a non-abrasive soap and put on clean clothing. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Keep out of reach of unauthorised persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

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.

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: Acid resistant gloves with a minimum 0.5mm thickness should be worn with sleeves worn over the top of the gloves.

Eye protection: No eye protection should be needed.

Emergency eye wash: 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: A white free flowing granule.

Odour: Slight musty.

Flammability: Not Flammable.

Flash point: Not applicable.

Melting point: 160 °C.

Vapour pressure: 1.27×10^{-5} Pa @ 22 °C.

pH: 3.9 pH (1% solution).

Explosivity: Not explosive.

Relative Density: 1.3.

Solubility in water: 142 g/kg @ 20 °C.

Other information: Product can be classified as nearly dust free.

10. STABILITY AND REACTIVITY

Stability: Stable in original containers for at least 2 years at ambient temperatures.

Conditions and Materials to Avoid: Store in a cool, well-ventilated place away from foodstuffs. Avoid excessive heat. **Hazardous decomposition products:** None under normal conditions of storage and use.

Instability: Store under cool, dry conditions (below 48.9 °C). Incompatible with strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀: >5,000 mg/kg.

Acute dermal LD₅₀: > 2,000 mg/kg through 5,000 mg/kg.

Inhalation: >2.1 mg/kg.

Acute skin irritation: Non-irritant.

Acute eye irritation: Non-irritant.

Chronic toxicity: No data. **Tetarogenic effects:** None.

Developmental toxicity: No data. **Mutagenic effects:** No effect.

Carcinogenicity: No effect. WHO (a.i.) U; EPA (formulation) IV.

12. ECOLOGICAL INFORMATION

Mobility, Degradability & Accumulation: Dissipates quickly in soil with most residues becoming bound and degrades rapidly under normal conditions in contact with soil (90% in 7 days). Neither hydrolysis nor photolysis is

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significant pathways for the degradation of **Daminozide**. No evidence of accumulation.

ECOTOXICOLOGY:

Birds: Bobwhite quail 8 day dietary LC₅₀ >10,000 mg/kg diet.

Fish: Rainbow Trout LC₅₀ 96h. 149 mg/ℓ.

Bees: Not toxic to bees. LD₅₀ >100µg/bee.

Daphnia: LC₅₀ (96h) 76 mg/ℓ.

Algae: EC₅₀ for Chlorella 180ppm.

Other spp.: No or mild effects on insect predators, parasitoids and predatory mites.

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: NR

Road Transport ADR/RID:

Class: Not classified.
 Packaging group: Not classified.
 Shipping name: Not classified. **Daminozide** 850 g/kg

Maritime Transport IMDG/IMO:

Class: Not classified.
 Packaging group: Not classified.
 Shipping name: Not classified. **Daminozide** 850 g/kg

15. REGULATORY INFORMATION

Symbol: None.

Risk phrase(s):

R 36 None.

Safety phrases:

S 2 Keep out of the reach of children.

S 13 Keep away from food, drink and animal feeding stuffs.

S 20/21 When using do not eat, drink or smoke.

S 36/37 Wear suitable protective clothing and glove.
S 46 If swallowed, seek medical advice immediately and show.
S 49 Keep in original container.

Specific provisions: Restricted to professional users. To avoid risks to man and the environment, comply with the directions for use.

16. OTHER INFORMATION

Packaging: Packed in 1, 5, 10, 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 but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.