

BOUND DRY 880 WSG

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: BOUND DRY 880 WSG
Other identifier: Glufosinate ammonium 880 WSG
Recommended use: Herbicide
Restrictions on use: Agriculture
Supplier: Villa Crop Protection (Pty) Ltd.
 Co. Reg. No.: 1992/002474/07
 PO Box 10413,
 Aston Manor, 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 (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

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Health		
Oral	Acute Tox. 4	H302
Dermal	Acute Tox. 5	H313
Eye	Eye Dam. 1	H318
Inhalation	Acute Tox. 4	H332
Specific target organ toxicity – Repeated exposure	STOT RE 2	H373
Reproductive toxicity	Repr. 1B	H360

The most important adverse effects:
Physiochemical effects: None known.
Human health effects:
 Harmful if swallowed (Acute Tox. 4).
 Causes serious eye damage (Eye Dam. 1).
 Harmful if inhaled (Acute Tox. 4).
 May damage fertility or the unborn child (Repr. 1B).
 May cause damage to organs through prolonged or repeated exposure (STOT RE 2).

Label elements:



Signal word: Danger.
Hazard statements:
 H302: Harmful if swallowed.
 H313: May be harmful in contact with skin.
 H318: Causes serious eye damage.
 H332: Harmful if inhaled.
 H360: May damage fertility or the unborn child.
 H373: May cause damage to organs through prolonged or repeated exposure.
Precautionary statements:
 P203: Obtain, read, and follow all safety instructions before use.
 P260: Do not breathe dust, fume, gas, mist, vapours, and spray.
 P261: Avoid breathing dust, fume, gas, mists, vapours, or spray.
 P264: Wash hands and face thoroughly after handling.
 P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
 P270: Do not eat, drink, or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P280: Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.
 P301+P317: IF SWALLOWED: Get medical help.
 P302+P317: IF ON SKIN: Get medical help.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P318: IF exposed or concerned, get medical advice.
 P319: Get medical help if you feel unwell.
 P330: Rinse mouth.
 P405: Store locked up.
 P501: Dispose of content/container to suitable landfill in accordance with local regulations.
Special labelling of certain mixtures:
 None known.
Other hazards:
 None known.
Toxicity:
 Classification according to GHS: Category 4.

3. COMPOSITION / INFORMATION ON INGREDIENTS

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Substance/Mixture: Mixture.

Composition:

Chemical Name	CAS	Conc. (m/m)	Classification EC 1272/2008
Glyphosate ammonium (95%) TC	77182-82-2	88%	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) STOT RE. 2 (H373) Repr. 1B (H360Fd)
Alkyl polyglucoside	68515-73-1	<10%	Eye Dam. 1 (H318)

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. Immediately consult a doctor.

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.

Skin contact: Remove contaminated clothing and shoes. 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. Obtain medical attention if irritation persists.

Eye contact: Flush eyes immediately with large amounts of 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: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

Anticipated acute effects:

None known.

Anticipated delayed effects: None known.

Most important symptoms/effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal.

Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with eyes and skin. Do not breathe in dust or mist.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways, or ground water.

Methods and Materials for Containment: Contain spilt product by diking area with sand or earth.

Methods and Materials for Clean-up: Contain spilled product by picking up with an electrically protected vacuum cleaner and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. See section 13 for disposal considerations.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Harmful if swallowed and if inhaled. Avoid contact with eyes and skin. Ensure adequate ventilation

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during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children, and animals. Store in its original, labelled container, tightly closed, in an isolated, dry, cool, and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed, and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic containers, boxes, plastic bags, poly woven bags, water soluble bags.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits have been determined for the significant ingredients in this product.

Engineering Controls:

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. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved air-purifying respirator.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact.

Eye Protection: The use of face shield mask or chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employee must wear appropriate protective clothing, e.g., coveralls, boots, hat

and equipment to prevent repeated or prolonged skin contact with this product.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this product; 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: White to Greyish water-soluble granule.

Odour: Odourless.

pH (1% aqueous dilution): 4.5 at 20 °C

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: Not available.

Flammability: Non-flammable.

Upper/lower explosion limits: Not explosive.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Bulk density: 0.6 g/cm³.

Degree of dispersion: The dispersibility was 80 % after 1 minute of stirring at 20 °C.

n-octanol/water partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability: This product is stable for 2 years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50°C, preferably below 30°C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Excessive temperature, contact with any type of reactive chemical.

Incompatible Materials: Avoid contact with strong acids, strong alkalis, oxidizers, or any other type of reactive material.

Hazardous Decomposition Products: Toxic gases may be released when the product decomposes on heating.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Calculated.

Oral LD₅₀ (24 h) >1700 mg/kg (rats).

Dermal LD₅₀ (24 h) >2200 mg/kg (rabbits).

Inhalation LC₅₀ (4 h) >2.95 mg/l (rats).

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Skin Irritation/Corrosion: Not classified.
Eye Damage/Irritation: Causes serious eye damage.
Skin Sensitization: Not classified.
Respiratory Sensitization: Not classified.
Reproductive cell mutagenicity: Not classified.
Carcinogenicity: Not classified.
Reproductive toxicity: May damage fertility or the unborn child.
Specific target organ toxicity – single exposure: Not classified.
Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: Not classified.
Chronic Effects: None known.
POTENTIAL ADVERSE EFFECTS:
Inhalation: Harmful if inhaled.
Skin contact: None known.
Eye contact: Due to inert, this mixture can cause serious eye damage.
Ingestion: Harmful if swallowed.
Other information: None known.

from the soil. Desiccation: most of the residues consist of parent glufosinate, with minor amounts of metabolite 3-MPP. Selective use: the principal metabolite is N-acetylglufosinate, with lesser amounts of parent and 3-MPP.

Persistence and degradability: Rapidly degraded in surface levels of soil, and in water. Because of polarity, it and its metabolites do not bioaccumulate. Metabolism in soil and water reviewed (*E. Dorn et al., Z. Pflanzenkr. Pflanzenschutz, 1992, Sonderheft XIII, pp. 459–468*). Degraded to 3-(methyl) phosphinoylpropionic acid and 2-(methyl) phosphinoylacetic acid, and ultimately to CO₂ and bound residues. In soil, DT₅₀ 3–10 d (lab.), 7–20 d (field); DT₉₀ 10–30 d (lab.); DT₅₀ of metabolites 7–19 d (lab.). DT₅₀ in water c. 2–30 d. Lysimeter studies and model calculations show that neither a.i. nor metabolites leach into groundwater; this appears to be due to rapid degradation, and adsorption to certain soil elements. Adsorption is more correlated with clay content than organic matter, K_{clay} 2–115, K_{oc} 10–1230 (*A. Zumdick et al., Proc. 9th IUPAC Int. Congr. Pestic. Chem., London, 1998, 2, 6A-023; idem, ibid., 6D-034*).

Bio-accumulative Potential: Not determined.
Mobility in soil: Not determined.
Other adverse effects: Not determined.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA: Active ingredient.

Fish:

LC ₅₀ (96 h)	Rainbow Trout	710 mg/ℓ
	Bluegill sunfish, carp, golden orfe	>1000 mg/ℓ

Daphnia:

LC ₅₀ (48 h)		668 mg/ℓ
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Birds:

Dietary LC ₅₀ (8d)	Japanese quail	>5000 mg/kg diet.
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Bees:

LD ₅₀		>100 µg/bee.
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Algae

LD ₅₀ (5d)	<i>Pseudokirchneriella subcapitata</i>	>80 mg/ℓ
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Worms:

LC ₅₀ (14 d)	Earthworms	>1000 mg/kg soil.
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ENVIRONMENTAL EFFECTS:

Plants: Non-selective use: only the metabolite, 3-(methyl) phosphinoylpropionic acid (3-MPP), is taken up in traces

13. DISPOSAL CONSIDERATION

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. 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. Comply with local legislation applying to waste disposal. The product container/bags may be taken to a registered waste disposal site or incineration plant.

Container: TRIPLE RINSE EMPTY PLASTIC BAG AS FOLLOWS: Turn the bag inside out Hold the bag over the spray or mixing tank and rinse the bag with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Cut the bag into pieces and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the bag to any other parties that may use it as container for foodstuffs.

14. TRANSPORT INFORMATION

UN Number: NOT REGULATED

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Not classified i.e. considered non-hazardous material according to UN Orange Book and international transport codes e.g. RID (rail), ADR (road) and IMDG (sea).

Special/Environmental Precautions: None known.

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 225 g, 450 g, 500 g, 900 g, 1 kg, 4.5 kg, 5 kg, 10 kg & 25 kg plastic containers, boxes and plastic bags; and labelled according to South African regulations and guidelines.

Additional H statements (formulants):

H312: Harmful in contact with skin

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 and 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: November 2020

Revised: July 2022

Revision no.: (4)

Next revision: July 2027

For detailed information on revisions, contact the Registration holder.