



# Material Safety Data Sheet

CS: 1.5.27

Infosafe No™ 3NU3B	Issue Date : February 2012	ISSUED by CRPCARE
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Product Name **GLADIATOR Herbicide**

Classified as hazardous

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** GLADIATOR Herbicide  
**Product Code** 0576  
**Product Type** Group M Herbicide  
**Company Name** Crop Care Australasia Pty Ltd (ABN 53 061 362 347)  
**Address** Unit 15/16 Metroplex Avenue Murarrie  
 Queensland 4172 Australia  
**Emergency Tel.** 1800 033 498 (24hr Australia)  
**Telephone/Fax Number** Tel: +61 7 3909 2000  
 Fax: +61 7 3909 2010  
**Recommended Use** A non-selective herbicide that will kill most emerged weeds and plants in situations as indicated in the directions for use table.  
**Other Information** This MSDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** Classified as hazardous  
 HAZARDOUS SUBSTANCE.  
 NON-DANGEROUS GOODS.  
 Hazard classification according to the criteria of NOHSC.  
 Dangerous goods classification according to the Australia Dangerous Goods Code.  
**Risk Phrase(s)** Classified as hazardous  
 R41 Risk of serious damage to eyes.  
**Safety Phrase(s)** S13 Keep away from food, drink and animal feeding stuffs.  
 S2 Keep out of reach of children.  
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
 S46 If swallowed, seek medical advice immediately and show this container or label.  
**Other Information** Poisons Schedule S5

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Liquid

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Glyphosate (present as the isopropylamine salt)	1071-83-6	450 g/L
	Surfactant		~10 %w/v
	Water		Balance

## 4. FIRST AID MEASURES

**Inhalation** Remove affected person to fresh air until recovered.  
**Ingestion** If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.  
 Do not give anything by mouth to a semi-conscious or unconscious person.  
 Give a glass of water.  
**Skin** Wash affected areas thoroughly with soap and water.  
 If irritation persists, seek medical advice.  
**Eye** If in eyes, hold eyelids open and wash with copious amounts of water for at



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**First Aid Facilities** least 15 minutes.  
Seek medical advice.  
If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

**Advice to Doctor** Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media** If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.  
Water, foam, carbon dioxide or dry chemical.

**Hazards from Combustion Products** Keep upwind.  
This product, or spray solutions of this product, react with galvanised steel or unlined steel (except stainless steel) containers and tanks, to produce hydrogen gas which may form a highly flammable or explosive gas mixture.  
If involved in a major fire, could evolve oxides of nitrogen or phosphorus.

**Special Protective Equipment for fire fighters** Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

**Other Information** STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

## 6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal** Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite).  
Collect in sealed open top containers for disposal.  
Final clean-up with degreasing agent or detergent is advised.

**Environmental Precautions** Prevent from entering drains, waterways or sewers.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** For personal protective equipment (PPE) and hygiene advice, refer Section 8.

**Conditions for Safe Storage** Store in the closed, original container in a dry, well ventilated area out of direct sunlight.  
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

**Other Information** Always read the label and any attached leaflet before use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No exposure standard has been established for this product.

**Engineering Controls** No special ventilation required.

**Personal Protective Equipment** When preparing product for use wear elbow-length PVC gloves and face shield or goggles.  
When using controlled droplet applicator, wear protective waterproof clothing and impervious footwear.

**Hygiene Measures** After each day's use, wash contaminated clothing and safety equipment.  
After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

**Requirements Concerning Special Training** Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** Liquid

**Appearance** Clear blue viscous liquid

**Odour** Faint amine odour

**Melting Point** -10°C

**Boiling Point** >100°C (water only)



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<b>Solubility in Water</b>	Soluble in water.
<b>Specific Gravity</b>	1.20
<b>pH Value</b>	4.5 - 5.0 (5% in water)
<b>Vapour Pressure</b>	Active ingredient is considered non volatile.
<b>Vapour Density (Air=1)</b>	Water only
<b>Volatile Component</b>	40% Water only
<b>Flammability</b>	Non combustible material.
<b>Auto-Ignition</b>	N/A
<b>Temperature Flammable Limits - Lower</b>	N/A
<b>Explosion Properties</b>	N/A

## 10. STABILITY AND REACTIVITY

<b>Incompatible Materials</b>	Corrosive to mild steel, galvanised steel and zinc. Non corrosive to stainless steel, polyethylene and plastics. Do not mix, store or apply the product or spray solutions of the product in galvanised steel or unlined steel (except stainless steel) containers or spray tanks.
<b>Hazardous Reactions</b>	Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. Such contact may release isopropylamine vapour with a strong fish like odour, which is an irritant to eyes. Isopropylamine is moderately toxic, LD50 (oral, rat) is 820 mg/kg and a TLV of 5 ppm (TWA) has been set.
<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicology Information</b>	No harmful effects are expected if the precautions on the label and this MSDS are followed.
<b>Inhalation</b>	When applying the product as a spray avoid breathing in spray mist. May cause irritation to mucous membranes and respiratory tract.
<b>Ingestion</b>	The concentrate is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. Possible symptoms of exposure include: nausea, vomiting and gastrointestinal discomfort and diarrhoea. Ingestion of a large quantity of the undiluted product may result in hypotension and pulmonary oedema.
<b>Skin</b>	The concentrated product may cause slight irritation on contact. Prolonged contact is likely to result in irritation.
<b>Eye</b>	The concentrate may cause severe irritation of the eyes unless washed off immediately. Prolonged contact with the concentrate may cause damage to the eye.
<b>Chronic Effects</b>	No information available, no chronic effects expected.
<b>Acute Toxicity - Oral</b>	LD50 (rat) >5000 mg/kg for a similar formulation
<b>Acute Toxicity - Dermal</b>	LD50 (rabbit) >5000 mg/kg for a similar formulation
<b>Acute Toxicity - Inhalation</b>	LC50 (rat) (4hr) >1.3 mg/l for a similar formulation LC50 concentration not reached.
<b>Eye Irritation</b>	This product is a severe eye irritant. Risk of serious damage to eyes.
<b>Skin Irritation</b>	Slight irritant.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for glyphosate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 30 mg/kg/day, the level determined to show no effects during long



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term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety and Environmental Health, 'ADI List', June 2011).

## 12. ECOLOGICAL INFORMATION

<b>Persistence / Degradability</b>	Adsorption studies indicate that glyphosate has very low mobility. Average field half life of glyphosate is 47 days.
<b>Known Harmful Effects on the Environment</b>	Harmful to fish and other aquatic organisms (mainly due to the surfactant).
<b>Other Precautions</b>	Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.
<b>Environ. Protection</b>	Glyphosate is a non-selective contact herbicide. Spray drift can cause damage.
<b>Acute Toxicity - Fish</b>	The following is data for a similar product. LC50 (96hr) for rainbow trout is 8.2 - 26 mg/l.
<b>Acute Toxicity - Daphnia</b>	EC50 (48hr) for daphnia is 11 mg/l for technical glyphosate.
<b>Acute Toxicity - Algae</b>	EC50 (72hr) for algae is 4.4 mg/l for technical glyphosate.
<b>Acute Toxicity - Other Organisms</b>	The following data is for the active ingredient, glyphosate. Birds: Not toxic to birds. LD50 for mallard ducks and bobwhite quail (diet) is 2000 mg/kg Bees: Not toxic to bees. LD50 >100 µg/bee.

## 13. DISPOSAL CONSIDERATIONS

<b>Product Disposal</b>	DO NOT dispose of undiluted chemicals on site. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
<b>Container Disposal</b>	Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. Do not use this container for any other purpose. DO NOT burn empty containers or product.

## 14. TRANSPORT INFORMATION

<b>Transport Information</b>	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
<b>Storage and Transport</b>	Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

## 15. REGULATORY INFORMATION

<b>Poisons Schedule</b>	S5
<b>Packaging &amp; Labelling</b>	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
<b>Hazard Category</b>	Irritant



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**Other Information**      This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 53868.

## 16. OTHER INFORMATION

**Date of preparation**      Revised 13/02/2012

**or last revision of MSDS**      This SDS replaces document dated February 2007.

**Contact**      Normal Hours:      Mrs Kathleen Marsh      Phone: +61 3 9282 1000

**Person/Point**      After Hours:      Shift Supervisor      Phone: 1800 033 498

**Revisions**      The MSDS was reviewed. Changes made to sections:

**Highlighted**      2, 5, 8, 9, 11, 12, 13, 15 and 16.

...End Of MSDS...

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