



# Material Safety Data Sheet

MSDS No.	1021	Issue Date : June 2007	ISSUED by SCOTSAU
Product Name :	<b>DEFENDER HOME GARDEN GLYPHOSATE 360 WEED CONTROL</b>		

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	DEFENDER HOME GARDEN GLYPHOSATE 360 WEED CONTROL
Product Code	190400
Manufacturer	SCOTTS AUSTRALIA PTY LTD
Address	11 Columbia Way Baulkham Hills NSW 2153 Australia
Emergency Tel.	1800 033 111
Telephone/Fax	Tel:(02) 8853 7300
Number	Fax:(02) 8853 7310
Recommended Use	Herbicide

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** Classified as hazardous according to NOHSC. Not classified as dangerous goods according to the ADG Code.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion	Ingredients
	Glyphosate as the isopropylamine salt	38641-94-0	36%	
	Surfactant	not disclosed	10-20%	
	Water	7732-18-5	balance	
all constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).				

## 4. FIRST AID MEASURES

<b>Inhalation</b>	Remove patient to fresh air. Obtain medical attention if irritation occurs and persists.
<b>Ingestion</b>	If poisoning occurs contact a doctor or poisons information centre, phone 13 11 26 (Australia) 0800 764 766 (New Zealand).
<b>Skin</b>	Remove contaminated clothing and wash the effected area thoroughly with soap and water. Obtain medical attention if irritation occurs and persists.
<b>Eye</b>	Flush eyes with clean water. Obtain medical attention if irritation occurs and persists.

## 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Water spray, foam, dry chemical, carbon dioxide and/or any Class B extinguishing agent.
<b>Hazards from Combustion Products</b>	If involved in a major fire, could evolve oxides of nitrogen and phosphorus.
<b>Special Protective Equipment for fire fighters</b>	Fire fighters or other exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Thoroughly decontaminate equipment after use.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Emergency Procedures</b>	Observe all PRECAUTIONS FOR USE. Use rubber boots or rubber overshoes when cleaning up spills. Contain and absorb liquid spills on floor or other impervious surfaces with absorbent clays e.g. attapulgate, bentonite or kitty litter. Collect contaminated absorbent, place in plastic-lined metal drum and dispose of in accordance with instructions provided under Waste Disposal. Thoroughly scrub floor or other impervious surfaces with a strong industrial type detergent solution and rinse with water. Dig up liquid spills that soak into the ground, place in lined metal drums and dispose of as recommended under Waste Disposal. Separate leaking containers from non-leakers and transfer either the container or its contents to a plastic-lined drum or other non-leaking container and dispose of as recommended under Waste Disposal. Any recovered spilled
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liquid should be similarly collected and disposed of.  
Avoid contamination of fertilizers, spray materials, seed, feed, food stuffs or water by storage or disposal.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** When using do not eat, drink or smoke.  
Avoid container breakage.

**Conditions for Safe Storage** Stable for at least 5 years under normal conditions of warehouse storage. Hazardous polymerization does not occur. The product can react with caustic (basic) materials to liberate heat. This is not a polymerization but rather a chemical neutralization in an acid/base reaction. Non-corrosive to stainless steel, polyethylene and plastics. Corrosive to mild steel, galvanized steel, aluminium and zinc.

DO NOT MIX, STORE OR APPLY THE PRODUCT OR SPRAY SOLUTIONS OF THE PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.

The product or spray solutions of the product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source. Spray solutions of the product should be mixed, stored and applied only in stainless steel, fibreglass, plastic and plastic-lined steel containers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** no exposure limits have been established for this product.

**Biological Limit Values** None allocated

**Engineering Controls** No specific precautions recommended.

**Respiratory Protection** Respiratory protection should not be required for normal use/handling. Avoid breathing spray mist. During periods of abnormal exposure to heavy spray or mist, use of respiratory equipment approved for pesticide vapour/mist is recommended. The respirator use limitations specified by the manufacturer must be observed. Respirator programs must be in compliance with AS 1715 and AS 1716.

**Eye Protection** Wear a face shield or chemical safety goggles to prevent eye contact with undiluted material where contact may occur. Have eye-flushing equipment available.

**Hand and body Protection** Although this material does not present a significant skin concern, minimise skin contamination by following good industrial practice. When handling the undiluted material wear elbow-length PVC gloves. Wash hands and contaminated skin thoroughly after handling. Launder contaminated clothing and clean protective equipment before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** Clear, amber coloured liquid.

**Odour** Faint, sweet odour.

**Melting Point** Approx 0°C

**Boiling Point** Approx. 100°C

**Solubility in Water** Soluble (Glyphosate 12g/L in water)

**pH Value** 1% solution in water: 4.6

**Vapour Pressure** Non-volatile (Glyphosate-  $3 \times 10^{-7}$  mm Hg)

**Vapour Density (Air=1)** Not available

**Specific gravity** 1.174

**Decomposition temperature** Not available



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Flashpoint >90 TCC  
Flammable Limits Not available

## 10. STABILITY AND REACTIVITY

**Chemical Stability** Stable for at least 5 years under normal conditions of warehouse storage. Hazardous polymerization does not occur. The product can react with caustic (basic) materials to liberate heat. This is not a polymerization but rather a chemical neutralization in an acid/base reaction. Non-corrosive to stainless steel, polyethylene and plastics. Corrosive to mild steel, galvanized steel, aluminium and zinc.  
DO NOT MIX, STORE OR APPLY THE PRODUCT OR SPRAY SOLUTIONS OF THE PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.  
The product or spray solutions of the product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source. Spray solutions of the product should be mixed, stored and applied only in stainless steel, fibreglass, plastic and plastic-lined steel containers.

**Conditions to Avoid** None known  
**Incompatible Materials** Galvanised steel, mild steel, aluminium, zinc  
**Hazardous Decomposition Products** None known

## 11. TOXICOLOGICAL INFORMATION

**Inhalation** The active ingredient has been in use for many years in Australia and in other countries. There are no reports of inhalation health effects in humans. No animal inhalation studies have been carried out. However, it may be mildly irritant to mucous membranes.

**Ingestion** No evidence is available for humans. Studies with rats show no acute effects after ingestion of up to 5000mg per kg body weight. Oral LD50 (Rat) >5000mg/kg.

**Skin** Studies with mice indicate mild transient irritant effects. Studies with guinea pigs indicate no irritancy and no potential to produce skin sensitisation. Dermal LD50 (Rabbit) >5000mg/kg.

**Eye** Studies with rabbits indicate mild irritant effects.

**Chronic Effects** The active ingredient has been in use in Australia for many years and there are no reports of health effects in workers due to long term exposure to this ingredient. Animal studies of the active ingredient have indicated no cancer, mutagenic, teratogenic or neurotoxic effects.  
Components: Isopropylamine salt of glyphosate  
Data from studies with a formulation comprised of 62% isopropylamine salt of glyphosate (MON 0139) indicate the following:  
In repeat dosing studies (6 month), dogs fed MON 0139 exhibited slight body weight changes. Following repeated skin exposures (3 week) to MON 0139, skin irritation was the primary effect in rabbits.  
Additional toxicity information is available on glyphosate, the active herbicidal ingredient of MON 0139. Following repeated exposures (90 days) to glyphosate in their feed, decreased weight gains were noted at the highest test level in mice, while no treatment-related effects occurred in rats. Following repeated skin exposure (3 weeks) to glyphosate, slight skin irritation was the primary effect observed in rabbits. No skin allergy was observed in guinea pigs following repeated skin exposure. There was no evidence of effects on the nervous system, including delayed



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effects in chickens (repeat oral doses) or cholinesterase inhibition in rats (single oral doses). Reduced body weight gain and effects on liver tissues were observed with long-term (2 year) feeding of glyphosate to mice at high-dose level in one long-term (2 year) feeding study with rats, while no treatment-related effects occurred in a second study. No adverse effects were observed in feeding studies with dogs. Glyphosate did not produce tumours in any of these studies. Based on the results from the chronic studies, EPA has classified glyphosate in category E (evidence of non-carcinogenicity for humans). No birth defects were noted in rats and rabbits given glyphosate orally during pregnancy, even at amounts which produced adverse effects on the mothers. Glyphosate was fed continuously to rats at very high dose levels for 2 successive generations. Toxicity was reported in offspring from the high dose level, a level which also produced adverse effects on the mothers. In a 3-generation study conducted at lower dose levels, no effects were seen on the ability of male or female rats to reproduce. Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells.

Component Surfactant: The surfactant components of this material are reported to cause irritation to the eyes.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Harmful to plants. Surfactant in product can be toxic to some aquatic organisms.
<b>Persistence / Degradability</b>	Average field half life for glyphosate is 47 days.
<b>Mobility</b>	Low mobility
<b>Environ. Protection</b>	Do not allow chemical or container to contaminate streams, ponds, drains and other waterways.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Considerations</b>	Dispose of waste in a landfill approved for pesticide disposal or bury under at least 500mm of soil in a non-crop non-pasture area away from water sources or homes.
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## 14. TRANSPORT INFORMATION

<b>Transport Information</b>	Not classified as dangerous goods according to the Australian Dangerous Goods Code.
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## 15. REGULATORY INFORMATION

<b>Regulatory Information</b>	APVMA No. 46178
<b>Poisons Schedule</b>	schedule 5

## 16. OTHER INFORMATION

<b>Date of preparation or last revision of MSDS</b>	MSDS Created: June 2007
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<b>Contact Person/Point</b>	Scotts Australia Pty Ltd 11 Columbia Way Baulkham Hills NSW 2153 Phone (02) 8853 7300 Fax (02) 8853 7310 Emergency phone 1800 033 111 ...End Of MSDS...	New Zealand: 180c Great South Rd Takanini, Auckland Phone (09) 299 6558 Fax (09) 296 0186 Emergency phone 0800 734 607
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