



MATERIAL SAFETY DATA SHEET

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Date of Issue 08/10/01
MSDS No. 1022

STATEMENT OF HAZARDOUS NATURE

Not classified as hazardous according to criteria of Worksafe Australia.

COMPANY DETAILS

Company Scotts Australia Pty. Ltd.
Address 11 Columbia Way, Baulkham Hills, NSW, 2153
Telephone Number (02) 8853 7300
Fax (02) 8853 7310
Emergency Telephone Number Australia: 1800 033 111
New Zealand: 0800 734 607

IDENTIFICATION

Product Name **ROUNDUP XTRA WEEDKILLER CONCENTRATE**
Other Names Glyphosate
Manufacturers Product Code 199510,199535,199530,199575,199570
UN Number None allocated
Dangerous Goods Class Not a Dangerous Good
Sub-Risk Class Not applicable
Packaging Group Not applicable
Hazchem Code Not applicable
Poisons Schedule S5
Uses Non selective herbicide

Physical Description /Properties

Appearance & Odour Clear, viscous, light amber liquid, faint amine odour
Melting point/softening point Approximately 0°C
Boiling Point Approximately 100°C
Vapour Pressure
Flashpoint >90 TCC
Flammability Limits Not applicable. This product does not burn.
Solubility in Water Soluble
pH 1% solution in water – 4.8
Incompatibility
Specific Gravity 1.21
Bulk density
Volatile Proportion
Corrosiveness See Reactivity data in Safe Handling

Ingredients

Ingredient	Chemical Name	CAS Number	Proportion % w/v
Active ingredients	Glyphosate isopropylamine salt	38641-94-0	49% approx. (as acid equivalent) 66% as isopropylame salt
Inserts	Surfactant Water	Not disclosed 7732-18-5	1-10% balance

HEALTH HAZARD INFORMATION

Health Effects

Acute

Swallowed 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.

Eye Studies with rabbits indicate mild irritant effects.

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.

Inhaled 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.

Chronic 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 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.

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First Aid

Swallowed	If poisoning occurs, contact a doctor or Poisons Information Centre (13 11 26).
Eye	Rinse eyes with clean water.
Skin	Wash skin with soap and water. If irritation occurs and persists, seek medical attention.
Inhaled	If vapors or mists have been inhaled and irritation has developed, remove to fresh air until recovered. If irritation persists, seek medical attention.
First Aid Facilities	Eye wash, water, soap.
Advice to Doctor	Not hazardous according to NOHSC Criteria. However, it is a mild eye irritant and may be mildly irritating to mucous membranes. If further treatment guidance is required, contact Emergency Response Number given under Company Details.
Medical conditions which may be aggravated by contact	None known.

PRECAUTIONS FOR USE

Exposure Standards	No exposure limits have been established for this material or its components.
Engineering Controls	No specific precautions recommended.
Personal Protection	<u>Precautionary Measures:</u> Avoid contact with eyes, skin and clothing. Avoid contamination of fertilizers, spray materials, seed, feed, food stuffs or water by storage or disposal. <u>Eye Protection:</u> Wear a face shield or chemical safety goggles to prevent eye contact with undiluted material where contact may occur. Have eye-flushing equipment available. <u>Skin Protection:</u> 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. <u>Respiratory Protection:</u> 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.
Flammability	Water based solution. Not combustible or flammable.

SAFE HANDLING INFORMATION

Storage and Transport	Stable for at least 5 years under normal conditions of warehouse storage. Avoid contamination of fertilizers, spray materials, seed, feed, food stuffs or water by storage or disposal. This product is not a Dangerous Good.
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SAFE HANDLING INFORMATION

Spills and Disposal

Spill or Leakage Procedures:

Observe all PRECAUTIONS FOR USE. Use of 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 liquid should be similarly collected and disposed of. Avoid contamination of fertilizers, spray materials, seed, feed, food stuffs or water by storage or disposal.

Waste Disposal:

If wastes cannot be used according to label instructions or chemically reprocessed, dispose of in a landfill approved for pesticide disposal or bury under at least 500 mm of soil in a non-crop, non-pasture area away from water sources or homes. Dispose of in accordance with all applicable local and state laws.

Containers:

Emptied containers retain material residue. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Triple rinse container, replace cap, then offer for recycling or reconditioning. Otherwise, dispose of in an approved landfill or bury under at least 500mm of soil in a non-crop, non-pasture area away from water sources or homes. Avoid contamination of fertilizers, spray materials, seed, feed, food stuffs or water by storage or disposal

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Fire/Explosion Hazard Extinguishing Media: Water spray, foam, dry chemical, carbon dioxide and/or any Class B extinguishing agent.

Special Fire Fighting Procedures: Fire fighters or other exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Thoroughly decontaminate equipment after use.

Unusual Fire and Explosion Hazards: None.

Reactivity Data: 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.

Hazardous Decomposition Products: None.

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OTHER INFORMATION

Environmental
Protection

Warning Statement: CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS ON LABEL BEFORE OPENING OR USING
HARMFUL IF SWALLOWED

IRRITATING TO EYES

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

Environmental Toxicity Information:

Data from the very similar product ROUNDUP Herbicide show the following:

Oral LD50 Dog	>5 mL/kg, Practically Non-toxic
Oral LD50 Goat:	4,860 mg/kg, slightly Toxic
48-hr LD50 Honeybee:	> 100 micrograms/bee, practically Non-toxic
48-hr EC50 Daphnia magna (with aeration):	37mg/L, slightly toxic
48-hr EC50 Daphnia magna (no aeration):	24mg/L, slightly toxic
48-hr EC50 Gammarus pseudolimnaeus:	42mg/L, slightly toxic
96-hr TL50 Carp:	19.7ppm, slightly toxic
96-hr LC50 Bluegill Sunfish (static):	14mg/L, slightly toxic
96-hr LC50 Bluegill Sunfish (flow-through):	5.8mg/L, moderately toxic
96-hr LC50 Rainbow Trout (static):	15-26mg/L, slightly toxic
96-hr LC50 Rainbow Trout (flow-through):	8.2mg/L, moderately toxic
96-hr LC50 Channel Catfish:	16mg/L, slightly toxic
96-hr Fathead Minnow:	9.4mg/L, moderately toxic
96-hr LC50 Coho Salmon:	22mg/L, slightly toxic
96-hr LC50 Chinook Salmon:	20mg/L, slightly toxic
96-hr LC50 Crayfish:	>1000 ppm, practically non-toxic

Carp contained in a static pond were unaffected at any time during a 90 day observation period following exposure by aerial application of ROUNDUP herbicide at the normal use concentration. Tissue residue analyses indicated that glyphosate, the active ingredient in ROUNDUP, will not bioaccumulate.

Exposure to ROUNDUP in freshwater concentrations of 0, 10, 103 and 990 microgram/L for 10 days did not impair the ability of salmon smolts to adapt to sea water.

Immersion of chicken eggs at 4 different embryo ages (0,6,12, and 18 days) for about 5 seconds in 1 of 5% v/v ROUNDUP in water solutions was reported to have no adverse effects on the hatchability or time to hatch of eggs.

Brahman-cross heifers were given ROUNDUP by gavage, at daily doses of 0, 400, 500, 630, 790 and 1000mg/kg for 7 consecutive days. Clinical signs of toxicity, including loss of appetite, diarrhea and death (790 and 1000mg/kg) were observed at 500mg/kg and above. The no-effect level was considered to be 400mg/kg/day.

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OTHER INFORMATION

BCF (Bioaccumulation factor):

Tests in a variety of mammalian/avian/aquatic species have shown that glyphosate does not bioaccumulate.

Degradation:

A primary degradation rate of glyphosate was determined in water after 30 days: 87.7%. The surfactants in Roundup Biactive are readily biodegradable according to OECD/EEC tests.

APVMA Registration No. 52699

CONTACT POINT

Emergency Response for Transport and Exposure	Scotts Australia Pty Ltd
Australia: 1800 033 111	11 Columbia Way
New Zealand: 0800 734 607	Baulkham Hills NSW 2153
	Phone (02) 8853 7300
	Fax (02) 8853 7310