



SAFETY DATA SHEET

ROUNDUP(R) HERBICIDE BY MONSANTO

Infosafe No.: LQ1E1
ISSUED Date: 13/10/2015
ISSUED BY SCOTTS AUSTRALIA PTY
LTD

1. IDENTIFICATION

GHS Product Identifier

ROUNDUP(R) HERBICIDE BY MONSANTO

Company Name

SCOTTS AUSTRALIA PTY LTD

Address

Level 2,
32 Lexington Drive, Bella Vista
NSW 2153 Australia

Telephone/Fax Number

Tel: (02) 8602 9000

Fax: (02) 8602 9001

Emergency phone number

1800 033 111

Recommended use of the chemical and restrictions on use

Weedkiller

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

GHS Classification:

Eye damage/irritation 1

Hazardous to the aquatic environment - acute hazard category 2

Signal Word (s)

DANGER

Hazard Statement (s)

H318 Causes serious eye damage.

H401 Toxic to aquatic life.

Pictogram (s)

Corrosion

**Precautionary statement – Prevention**

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response

P310 Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Isopropylamine salt of glyphosate	38641-94-0	40-<45 %
Ethoxylated Tallow Amine		10-<15 %
Ingredients determined not to be hazardous.		Balance

4. FIRST-AID MEASURES

Inhalation

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms persist seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin

Wash affected area thoroughly with soap and water. Take off contaminated clothing, wristwatch, jewellery. Wash clothes and clean shoes before re-use. If symptoms develop seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically. This product is not an inhibitor of cholinesterase.

Antidote:

Treatment with atropine and oximes is not indicated.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use water, foam, dry chemical, carbon dioxide.

Unsuitable Extinguishing Media

Not available

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx).

Specific Hazards Arising From The Chemical

This product is non combustible. However, following evaporation of aqueous component under fire conditions, the non-aqueous component may decompose and/or burn. Minimise use of water to prevent environmental contamination.

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Wear appropriate personal protective equipment and clothing to prevent exposure. Increase ventilation. If possible contain the spill. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. Do not dilute material but contain. As a water based product, if spilt on electrical equipment the product will cause short-circuits. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

Small spill: Flush spill area with water.

Large spill: Absorb in earth, sand or absorbent material. Dig up heavily contaminated soil. Collect in containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Avoid inhalation of vapours and mists, and skin or eye contact. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers tightly closed.

Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

Protect from freezing.

Partial crystallization may occur on prolonged storage below the minimum storage temperature. If frozen, place in warm room and shake frequently to put back into solution. This formulation can be stored for 2 to 3 weeks at temperatures colder than -20°C without impact. If the temperature remains below -20°C for longer the water phase of the formulation may freeze. Should this occur allow the product to warm and it will return to its original homogeneous state. We recommend that the container should be agitated (shaken) prior to pouring.

Minimum shelf life: 5 years.

Storage Temperatures

Minimum storage temperature: -15 °C

Maximum storage temperature: 50 °C

Recommended Materials

Stainless steel, aluminium, fibreglass, plastic, glass lining. Keep in original packaging.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for the mixture. However, over-exposure to some chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with full face shield should be used. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material such as nitrile, butyl, neoprene, polyvinyl chloride (PVC), natural rubber and/or barrier laminate. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Liquid	Appearance	Pale amber-pale brown Liquid, free from foreign materials
Colour	Pale amber-pale brown	Odour	Slight
Decomposition Temperature	Not available	Melting Point	Not available
Boiling Point	Not available	Solubility in Water	Soluble
Specific Gravity	1.168	pH	4.7 (80g/l)
Vapour Pressure	Not available	Vapour Density (Air=1)	Not available
Evaporation Rate	Not available	Odour Threshold	Not available
Viscosity	Not available	Partition Coefficient: n-octanol/water	Not available
Density	1.168g/cm ³ (20°C)	Flash Point	Does not flash
Flammability	Non-combustible liquid	Auto-Ignition Temperature	Not available
Flammable Limits - Lower	Not available	Flammable Limits - Upper	Not available
Explosion Properties	Not available	Oxidising Properties	None

Other Information

log Pow: -3.2 at 25°C (glyphosate)

10. STABILITY AND REACTIVITY

Reactivity

Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

Chemical Stability

Stable under normal conditions of storage and handling.

Reactivity and Stability

Reacts with incompatible materials

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Incompatible materials for storage: galvanised steel, unlined mild steel

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes and gases including carbon monoxide, carbon dioxide, oxides of nitrogen and oxides of phosphorus.

Possibility of hazardous reactions

Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this material. Data obtained on more concentrated products and on components are summarized below.

Acute Toxicity - Oral

More concentrated formulation:

LD50 (Rat): 5000 mg/kg body weight

Acute Toxicity - Inhalation

More concentrated formulation:

Rat, LC50 (limit test), 4 hours, aerosol: 3.18 mg/L

Aerosol particle size (< 10 micron) much lower than the droplet size (> 100 micron) normally achieved during spraying operations.

This product is not aerosolized during handling or use

Acute Toxicity - Dermal

More concentrated formulation:

LD50 (rabbit, limit test): >5000 mg/kg body weight

No mortality

Ingestion

Not classified according to GHS criteria.

Inhalation

Not classified according to GHS criteria.

Skin

Not classified according to GHS criteria.

More concentrated formulation:

Skin irritation

Rabbit, 6 animals, OECD 404 test:

Redness, mean EU score: 0.64

Swelling, mean EU score: 0.03

Days to heal: 3

Eye

Causes serious eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and possible burns, necrosis, permanent damage and blindness.

More concentrated formulation:

Eye irritation

Rabbit, 6 animals, OECD 405 test:

Conjunctival redness, mean EU score: 1.17

Conjunctival swelling, mean EU score: 1.60

Corneal opacity, mean EU score: 0.57

Iris lesions, mean EU score: 0.50

Days to heal: > 28

Other effects: pannus, ulcer on surface of eye (ulceration of cornea)

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

More concentrated formulation:

Guinea pig, 9-induction Buehler test:

Positive incidence: 0 %

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

N-(phosphonomethyl)glycine; (glyphosate acid)

Genotoxicity

Not genotoxic

Carcinogenicity

Not carcinogenic in rats or mice.

Reproductive/Developmental Toxicity

Developmental effects in rats and rabbits only in the presence of significant maternal toxicity.

Reproductive effects in rats only in the presence of significant maternal toxicity.

Ethoxylated tallowamine

Genotoxicity

Not genotoxic

Reproductive/Developmental Toxicity

Reproductive effects in rats only in the presence of maternal toxicity.

No developmental effects in rats.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life. Data obtained on a similar glyphosate formulation and/or glyphosate are summarized below.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Prevent this material entering waterways, drains and sewers.

Acute Toxicity - Fish

Similar formulation

Bluegill sunfish (*Lepomis macrochirus*):
Acute toxicity, 96 hours, flowthrough, LC50: 5.8 mg/L
Rainbow trout (*Oncorhynchus mykiss*):
Acute toxicity, 96 hours, flowthrough, LC50: 8.2 mg/L
Rainbow trout (*Oncorhynchus mykiss*):
Prolonged exposure toxicity, 21 days, flowthrough, NOEC: 2.4 mg/L

Acute Toxicity - Daphnia

Similar formulation

Water flea (*Daphnia magna*):
Acute toxicity, 48 hours, static, EC50: 11 mg/L
Water flea (*Daphnia magna*):
Life cycle/reproduction test, 21 days, semi-static, NOEC: 3.2 mg/L

Acute Toxicity - Algae

Similar formulation

Green algae (*Selenastrum capricornutum*):
Acute toxicity, 72 hours, static, ErC50 (growth rate): 8.0 mg/L
Green algae (*Selenastrum capricornutum*):
Acute toxicity, 72 hours, static, NOEC (growth rate): 1.5 mg/L

Acute Toxicity - Other Organisms

Similar formulation

Arthropod toxicity
Honey bee (*Apis mellifera*):
Oral, 48 hours, LD50: > 395 µg/bee
Honey bee (*Apis mellifera*):
Contact, 48 hours, LD50: > 338 µg/bee
Soil organism toxicity, invertebrates
Earthworm (*Eisenia foetida*):
Acute toxicity, 14 days, LC50: > 5000 mg/kg dry soil

Other Information

N-(phosphonomethyl)glycine; { glyphosate acid}

Avian toxicity
Bobwhite quail (*Colinus virginianus*):
Dietary toxicity, 5 days, LC50: > 4640 mg/kg diet
Mallard duck (*Anas platyrhynchos*):
Dietary toxicity, 5 days, LC50: > 4640 mg/kg diet
Bobwhite quail (*Colinus virginianus*):
Acute oral toxicity, single dose, LD50: > 3851 mg/kg body weight

Bioaccumulation

Bluegill sunfish (*Lepomis macrochirus*):
Whole fish: BCF: < 1
No significant bioaccumulation is expected.

Dissipation

Soil, field:
Half life: 2 - 174 days
Koc: 884 - 60000 L/kg
Adsorbs strongly to soil.
Water, aerobic:
Half life: < 7 days

13. DISPOSAL CONSIDERATIONS

Disposal considerations

Dispose of waste according to applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information

Road and Rail Transport (ADG Code):

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) (7th edition).

Marine Transport (IMO/IMDG):

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

U.N. Number

None Allocated

UN proper shipping name

None Allocated

Transport hazard class(es)

None Allocated

Special Precautions for User

Not available

IMDG Marine pollutant

No

Transport in Bulk

Not available

15. REGULATORY INFORMATION

Regulatory information

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poisons Schedule

S5

16. OTHER INFORMATION

Date of preparation or last revision of SDS

MSDS Reviewed: October 2015

MSDS Supersedes: October 2012

References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous

chemicals.

Workplace exposure standards for airborne contaminants, Safe work Australia.

American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

END OF SDS

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