

# MATERIAL SAFETY DATA SHEET

MAR 31 1997

**SOLARIS**

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DATE PREPARED: 09/25/1995

MSDS No: 6045

Roundup® Ready-To-Use Weed & Grass Killer

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Roundup® Ready-To-Use Weed & Grass Killer  
Product Description: Herbicide

**MANUFACTURER:**  
The SOLARIS Group  
of Monsanto Company  
P.O. Box 5008  
San Ramon, CA 94583-0808

**24 HR. EMERGENCY TELEPHONE  
NUMBERS:**  
Emergency Phone 800-454-2333

EPA Reg. No.: 239-2638A PN: 6035-A

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

|  | <u>wt.%</u> | <u>CAS Registry #</u> |
|--|-------------|-----------------------|
| Glyphosate, Isopropylamine salt of N-(phosphonomethyl) glycine | 0.96        | 38641-94-0            |
| INERT INGREDIENTS  | ~99.04      |                       |

"Inert Ingredients" is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (40 CFR 158.153). It refers to any substance, other than an active ingredient, which is intentionally added to a pesticide product. Some inert ingredients may be hazardous chemicals, as defined by the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). The hazards associated with these inert ingredients have been included in this document.

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

#### PHYSICAL APPEARANCE:

Yellow or off-white hazy liquid.

#### IMMEDIATE CONCERNS:

- WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING
- CAUSES EYE IRRITATION
- AVOID CONTACT WITH EYES OR CLOTHING
- KEEP OUT OF REACH OF CHILDREN

### POTENTIAL HEALTH EFFECTS

#### EYES:

This substance causes moderate irritation to the eyes. Eye contact may include discomfort, tearing, swelling, redness, and blurred vision. See Toxicological Information, section 11.

#### SKIN:

This substance is not expected to cause skin irritation.



**INGESTION:**

If swallowed, this product may cause gastrointestinal tract irritation.

**INHALATION:**

If inhaled, this substance is considered practically non-toxic to internal organs. This substance may be irritating if inhaled. Read the Toxicological Information section (11) of this document for more information.

**COMMENTS HEALTH:**

Inhalation and skin contact are expected to be the primary routes of occupational exposure to ROUNDUP Ready-To-Use Weed & Grass Killer. Occupational exposure to this material has not been reported to cause significant adverse health effects. However, swallowing of a similar, but more concentrated formulation, has been reported to produce gastrointestinal discomfort, nausea, vomiting and diarrhea.

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#### 4. FIRST AID MEASURES

**EYES:**

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. Call a physician if irritation persists.

**SKIN:**

No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

**INGESTION:**

If swallowed, immediately telephone a poison control center, emergency treatment center or a physician for advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then immediately take person and product container, with label, to an emergency treatment center.

**INHALATION:**

Since this material is not expected to be an immediate inhalation problem, no first aid procedures are required. If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

**ADDITIONAL INFORMATION:**

In case of medical emergencies involving this product, call collect day or night, 1-314-694-4000.

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#### 5. FIRE FIGHTING MEASURES

Flashpoint and Method: >212°F TAG CC

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**EXTINGUISHING MEDIA:**

Water spray, foam, CO<sub>2</sub>, dry chemical or any class B extinguishing agent.

**FIRE FIGHTING PROCEDURES:**

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Equipment should be thoroughly cleaned after use. Read the entire document.

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## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:**

Soak up spilled material with paper towels and discard in trash.

**LARGE SPILL:**

Liquid spills on floor or other impervious surfaces should be contained or diked, and should be absorbed with attapulgite, bentonite or other absorbent clays. Collect contaminated absorbent, place in plastic-lined metal drum and dispose of in accordance with instructions provided under Section 13. "DISPOSAL". Thoroughly scrub floor or other impervious surface with a strong industrial type detergent solution and rinse with water.

For liquid spills that soak into the ground, contact the applicable Federal, State and or County Health Dept. for disposal recommendations. If disposal is required then refer to Section 13 "DISPOSAL" for instructions.

Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other non-leaking container and disposed of in accordance with instructions provided under Section 13 "Disposal". Any recovered spilled liquid should be similarly collected and disposed of.

Do not contaminate water, foodstuffs or feed by storage or disposal.

**GENERAL PROCEDURES:**

Observe all protection and safety precautions when cleaning up spills – see Section 8. "EXPOSURE CONTROLS/PERSONAL PROTECTION". For help with any spill, leak, fire or exposure involving this material, call day or night (800) 454-2333.

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## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:**

Keep pesticide in original container. For containers larger than 24 oz.: Place sprayer nozzle under handle on container so the sprayer is not below level of contents of container to prevent leakage. Store in a secure, preferably locked, storage area. Protect container from freezing.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### ENGINEERING CONTROLS:

No special ventilation is necessary.

### PERSONAL PROTECTION

#### EYES AND FACE:

For application of product in accordance with label instructions, no special eye protection is needed.

Handling of the product is not likely to present an eye exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which could cause eye contact, workers should wear goggles or a face shield.

#### SKIN:

No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing. Wash thoroughly with soap and water after handling.

#### RESPIRATORY:

Handling of the product is not likely to present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which produces a heavy mist, workers should put on respiratory protection equipment. Consult respirator manufacturer to determine appropriate type of equipment. Observe respirator use limitations specified by NIOSH MSHA or the manufacturer.

For application of product in accordance with label instructions, no special respiratory protection is required.

#### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

|                              | EXPOSURE LIMITS     |           |                     |
|------------------------------|---------------------|-----------|---------------------|
|                              | OSHA PEL            | ACGIH TLV | ACGIH STEL          |
| Ethoxylated Tallowamines     | None                | None      | None                |
| Potassium Hydroxide Solution | 2 mg/m <sup>3</sup> | None      | 2 mg/m <sup>3</sup> |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Yellow or off-white hazy liquid.

pH: ~6.5 to 7.0

Solubility in Water: Soluble

Specific Gravity: 1.0055 gr/cc at 20°C

Viscosity: Same as water.

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**COMMENTS:**

Density: Density = 8.3 to 8.9 lbs./gal.

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**10. STABILITY AND REACTIVITY**

STABLE: Yes

HAZARDOUS POLYMERIZATION: Yes

**CONDITIONS TO AVOID**

HAZARDOUS DECOMPOSITION:

None.

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**11. TOXICOLOGICAL INFORMATION****ACUTE**

Eyes: Based on the results of the rabbit eye irritation test, this product is considered to be moderately irritating to the eyes. No ocular opacity was observed during the study. Iritis observed in 5 of 6 test eyes at the 1 hour scoring interval. The iridal irritation resolved completely in all animals by the 24 hour interval. Conjunctivitis was noted in 6 of 6 test eyes at the 1 hour scoring interval. The conjunctival irritation resolved completely in all animals by study day 10.

Skin: Practically non-toxic, (Rat LD50 >5000 mg/Kg)

No skin allergy was observed in guinea pigs following repeated skin exposure.

Ingestion: Practically non-toxic, (Rat LD50 >5000 mg/Kg)

Inhalation: Practically non-toxic, (Rat 4-hr LC50 >10mg/L)

**GENERAL COMMENTS:**

Data from laboratory studies conducted 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 exposure (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

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weight gain and effects on liver tissues were observed with long-term (2-year) feeding of glyphosate to mice at high dose levels. Reduced body weight gain and eye changes were observed at the high dose level in one long term (2-year) feeding study with rats, while no treatment related effects occurred in a second study at lower dose levels. No adverse effects were observed in feeding studies with dogs. Glyphosate did not produce tumors in any of these studies. Based on the results from the chronic studies, EPA has classified glyphosate in category E (evidence of noncarcinogenicity 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, 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.

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## 12. ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION:

Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters.

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## 13. DISPOSAL CONSIDERATIONS

### FOR LARGE SPILLS:

Material collected that cannot be reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or local procedures.

### PRODUCT DISPOSAL:

The Solaris Group is committed to responsible environmental practices and recommends that all of the product be used up, carefully following all label directions and precautions.

If necessary to dispose of partially filled product container, then securely wrap it in several layers of newspaper and discard in trash.

### EMPTY CONTAINER:

Do not reuse spray bottle except for refill in accordance with directions on the ROUNDUP Quick Stick Grass & Weed label. If not used for refill, rinse thoroughly before discarding in trash.

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## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

Proper Shipping Name: Not Regulated

Hazard Class: None

NA/UN Number: None

Packing Group: No

U.S. Surface Freight Class: Tree or weed killing compounds, NOI, Density of 20 lbs. or greater per cu. ft.

### AIR (I.C.A.O.)

Proper Shipping Name: Not Regulated

### SPECIAL SHIPPING NOTES:

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

## 15. REGULATORY INFORMATION

### UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

|  |             |          |                |                         |
|--|-------------|----------|----------------|-------------------------|
| PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA |             |          |                |                         |
| Acute: No  | Chronic: No | Fire: No | Reactivity: No | Pressure Generating: No |

### TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA Regulatory: All non FIFRA regulated components are on the US EPA's TSCA Inventory List.

## 16. OTHER INFORMATION

Hazard Rating Systems: This information is for people trained in the use of the following hazard identification systems. National Paint & Coatings Association's (NPCA) "Hazardous Materials Identification System" (HMIS) and the National Fire Protection Association's (NFPA) Hazard Diamond.

### HMIS Rating

|              |   |
|--------------|---|
| Health       | 2 |
| Flammability | 0 |
| Reactivity   | 0 |
| Protection   | - |

#### Key

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

Approval date: 09/27/1995

### REVISION SUMMARY

Revision #: 1

This MSDS replaces the September 12, 1995 MSDS. Any changes in information are as follows: In Section 1

Date EPA Product Number

### COMMENTS:

For additional information concerning this product, call the SOLARIS Groups Consumer Helpline at 800-225-2883.

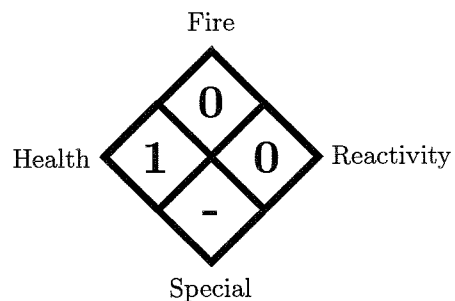
### MANUFACTURER DISCLAIMER:

This Material Safety Data Sheet (MSDS) contains health, safety and environmental information for you and your employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label. Information contained in this MSDS will help you to prepare for emergency response and to meet community right-to-know, emergency response and reporting requirements under SARA Title III and many other laws. Emergency response agencies and health care providers will also find this additional information useful.

Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved label copy. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company and The Solaris Group make no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determinations as to its suitability for their purposes prior to use. In no event will Monsanto Company

### NFPA Rating







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