MATERIAL SAFETY DATA SHEET

DATE PREPARED: 03/11/1999

MSDS No: 6098

SOLARIS

MSDS 110: 0098

READY-SPRAY WEED-B-GON Lawn Weed Killer

1. CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: READY-SPRAY WEED-B-GON Lawn Weed Killer

PRODUCT DESCRIPTION: Herbicide

IDENTIFICATION

MANUFACTURER

The SOLARIS Group of Monsanto Company P.O. Box 5008 San Ramon, CA 94583-0808 24 HR. EMERGENCY TELEPHONE NUMBERS

Emergency Phone 800-225-2883

EPA REG. NO.: 239-2664 PN: 6065

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS#
Mecoprop, dimethylamine salt	10 .6	32351-70-5
2,4-D, dimethylamine salt	3 .0 5	2008-39-1
Dicamba, dimethylamine salt	1 .3	1918-00-9

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Brown or black uniform liquid with amine odor.

IMMEDIATE CONCERNS: HARMFUL IF SWALLOWED AVOID CONTACT WITH EYES, SKIN OR CLOTHING KEEP OUT OF REACH OF CHILDREN

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POTENTIAL HEALTH EFFECTS

EYES: The undiluted product is moderately irritating to the eyes. Eye contact may include discomfort, tearing, swelling, redness, and blurred vision. See Toxicological Information, section 11.

SKIN: The undiluted product is considered a slight skin irritant. Skin irritation may include discoloration, itching and swelling. This substance is slightly toxic to internal organs if absorbed through the skin. The degree of injury will depend on the amount absorbed. See Toxicological Information, section 11.

INGESTION: This substance is slightly toxic to internal organs if swallowed. The degree of injury will depend on the amount absorbed from the gut. See Toxicological Information, section 11.

INHALATION: The systemic toxicity of this substance has not been determined. However, results of a rat 4 hour aerosol inhalation study on a similar formulation, indicated a slight degree of toxicity. See Toxicological Information section 11.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. If irritation persists, see a doctor.

SKIN: Thoroughly wash hands and exposed skin with soap and water. If irritation develops, get medical attention. Remove contaminated clothes and launder separately. If clothing is saturated, remove as soon as possible and shower.

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: 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 day or night, (800) 225-2883.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: >200°F TAG CC

EXTINGUISHING MEDIA: CO2, dry chemical, foam and water fog.

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce oxides of nitrogen. Incomplete combustion can produce carbon monoxide.

FIRE FIGHTING PROCEDURES: Smoke from fires involving this material may present unusual hazards. Avoid breathing smoke and mists. Avoid contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Read the entire document.

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, food stuffs 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) 225-2883.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. 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 normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standards (in Section 8), then special ventilation may be required.

PERSONAL PROTECTION

EYES AND FACE: Do not get this material in your eyes. Eye contact should be avoided by wearing chemical goggles or a face shield.

SKIN: Wear protective clothing when handling or applying this product including long pants, long sleeved shirt, socks, shoes, and chemical resistant gloves. Wash nondisposable gloves throughly with soap and water before removing. Remove contaminated clothing and launder separately before reuse. Promptly and throughly wash hands and exposed skin with soap and water after using this product.

RESPIRATORY: Handling of the undiluted product is not likely to present an airborne exposure concern during normal handling. In the event of an accidential discharge of the material during manufacture or handling which produces a heavy vapor or 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 diluted in accordance with label instructions, no special respiratory protection is required.

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

EXPOSURE LIMITS

Chemical Name	OSHA PEL	ACGIH TLV	ACGIH STEL
Mecoprop, dimethylamine salt	None	None	None
2,4-D, dimethylamine salt	10 mg/m3	10 mg/m3	None
Dicamba, dimethylamine salt	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Brown or black uniform liquid with amine odor

pH: ~7.5 to 8.0

PERCENT VOLATILE: No Data Available

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: No data Available

BOILING POINT: 212°F

SOLUBILITY IN WATER: Miscible with water.

EVAPORATION RATE: Not Determined

SPECIFIC GRAVITY: 1.037 gr/cc at 20°C

VISCOSITY: Same as water.

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

HAZARDOUS DECOMPOSITION: Partial combustion may form carbon monoxide and nitrogen oxides.

INCOMPATIBLE MATERIALS: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: Rabbit: similar formulation indicated - may be a moderate eye irritant. All irritation resolved by day 14 of the study.

DERMAL LD₅₀: Rabbit: similar formulation > 2.0 gm/kg. EPA FIFRA toxicity category - IV.

SKIN IRRITATION: Rabbit: similar formulation - may be a slight skin irritant. All treated skin sites were normal by day 7 of the study.

ORAL LD $_{50}$: Rat: similar formulation - >= 5.0 gm/kg. EPA FIFRA toxicity category - IV.

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INHALATION LC₅₀: Rat 4-hour acute aerosol - similar formulation > 5.36 mg/l. EPA FIFRA toxicology category - IV.

SENSITIZATION: Guinea pig - similar formulation - was not a skin sensitizer in the Buehler Guinea Pig Sensitization Test.

CARCINOGENICITY:

CARCINOGENICITY COMMENTS: Based on the results of animal toxicology studies, epidemological investigations and findings from scientific review groups, 2,4-D is not considered to be a carcinogen. The EPA has classed 2,4-D in carcinogenic category "D" meaning the weight of the scientific evidence does not demonstrate a cause and effect relationship betweeen 2,4-D and cancer.

NEUROTOXICITY: Numerous neurotoxicity studies involving several species, using high dose and repeated administration of 2,4-D, failed to demonstrate any clinically or histological evidence that the chemical is a neurotoxin.

REPRODUCTIVE TOXIN: 2,4-D has not demostrated adverse reproductive effects or to have been associated with any teratological or birth defects.

MUTAGENICITY: 2,4-D is not considered a mutagen.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available.

ECOTOXICOLOGICAL INFORMATION: This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from target area. When cleaning equipment, do not pour the washwater on the ground, spray or drain over a large area away from wells and other sources. Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPP have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D and MCPP pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will hel p prevent groundwater contamination.

13. DISPOSAL CONSIDERATIONS

FOR LARGE SPILLS: Material collected that cannot be reprocessed should be

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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 container. Rinse throughly before discarding in trash.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

PRIMARY HAZARD CLASS/DIVISION: None

UN/NA NUMBER: NONE

PACKING GROUP: No

U.S. SURFACE FREIGHT CLASS: Tree or weed killing compounds, NOI

OTHER SHIPPING INFORMATION: DOT and CERCLA Reportable Quanity (RQ) is 1000 lbs. (for Dimethylamine).DOT and CERCLA Reportable Quanity (RQ) is 1000 lbs. (for Dicamba).DOT and CERCLA Reportable Quanity (RQ) is 100 lbs. (for 2,4-D).

AIR (ICAO/IATA)

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

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SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA						
ACUTE:	CHRONIC:	FIRE:	REACTIVITY:	PRESSURE		
YES	NO	NO	NO	GENERATING: NO		

313 REPORTABLE INGREDIENTS: Mecoprop (CAS 93-65-2); Dicamba (CAS 1918-00-9); Dimethylamine (CAS 124-40-3). De Minimis Concentrations for Section 313 of EPCRA is 1.0%.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

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

16. OTHER INFORMATION

HMIS CODES

FIRE: 0 HEALTH: 2 REACTIVITY: 0 PROTECTION: -

NFPA CODES

FIRE: 0 HEALTH: 2 REACTIVITY: 0 SPECIAL: -

APPROVAL DATE: 03/11/1999

REVISION SUMMARY New MSDSIn Section 11

Dermal LD50 (text) Carcinogenicity (text) Neurotoxicity (text) Oral LD50 (text) Inhalation LC50 (text) Reproduction (text) Mutagenicity (text) Sensitization (text)

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)

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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 (herinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company and The Solaris Group make no re presentations 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 purposees prior to use. In no event will Monsanto Company or The Solaris Group be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.