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MATERIAL SAFETY DATA SHEET



DATE PREPARED: 04/17/1996

MSDS No: 5683

ORTHO®GRASS-B-GON®Grass Killer Formula II

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ORTHO® GRASS-B-GON® Grass Killer Formula II

PRODUCT DESCRIPTION: Herbicide

MANUFACTURER 24 HR. EMERGENCY TELEPHONE NUMBERS

The SOLARIS Group

of Monsanto Company

P.O. Box 5008

San Ramon, CA 94583-0808

EPA REG. NO.: 239-2620 PN: 5636-B

NUMBERS

Emergency Phone 800-454-2333

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS Registry #</u>
Fluazifop-P-butyl Butyl (R)-2-(4-((5-(trifluoromethyl)-2-pyridinyl)oxy)phenoxy)propanoate	0.48	79241-46-6
INERT INGREDIENTS	~99.52	

"Inert Ingredients" is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (40 CFR 8.153). 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: Clear to white hazy liquid.

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IMMEDIATE CONCERNS: CAUSES EYE IRRITATION

- AVOID CONTACT WITH EYES OR CLOTHING
- KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS

EYES: This substance is slightly irritating to the eyes. Eye contact may include discomfort, tearing, redness, swelling, and blurred vision. See Toxicological Information, section 11.

SKIN: This substance is not expected to cause prolonged or significant skin irritation. If absorbed through the skin, this substance is considered practically non-toxic to internal organs. This product is not expected to cause allergic skin reaction. See Toxicology Information section (11).

INGESTION: If swallowed, this substance is considered practically non-toxic to internal organs. See Toxicology Information, section 11.

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

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 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 day or night, (800) 454-2333.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Nonflammable

EXTINGUISHING MEDIA: Use appropriate agent for surrounding fire - product is not combustible.

HAZARDOUS COMBUSTION PRODUCTSNo data available.

FIRE FIGHTING PROCEDURESFor 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. 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 attapulgit 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 PROCEDURESObserve 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.

7. HANDLING AND STORAGE

GENERAL PROCEDURESKeep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in a cool, preferably locked, storage area. Protect container from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLSNo special ventilation is usually necessary. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed.

PERSONAL PROTECTION

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

Handling of this product during manufacturing or in the event of an accidental discharge of the material which could cause eye contact, workers should wear goggles or a face shield.

SKIN: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves. The type of gloves recommended are: PVC.

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 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):

<u>Chemical Name</u>	<u>EXPOSURE LIMITS</u>		
	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>ACGIH S</u>
Butyl (R)-2-(4-((5-(trifluoromethyl)-2-pyridinyl)oxy)phenoxy)propanoate	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Clear to cloudy white liquid

pH: 6.8

VAPOR PRESSURE: Not Determined

FREEZING POINT: No Data Available

SOLUBILITY IN WATER: Miscible with water.

DENSITY: 8.37 lbs./gal. at 20°C

SPECIFIC GRAVITY: 1.003 gr/cc at 20°C

VISCOSITY: 13cps (Brookfield)

10. STABILITY AND REACTIVITY

STABLE: YES

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HAZARDOUS POLYMERIZATIONNO**HAZARDOUS DECOMPOSITION**No data available.**INCOMPATIBLE MATERIALS**May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: Results of the rabbit eye irritation study indicate that all eye irritation clearing in 72 hours.

DERMAL LD₅₀: No irritation at 24 hours. The Draize Skin Primary Irritation Score (range, 0-8) for a 4-hour exposure (rabbits) is 0.6. The dermal LD₅₀ in rabbits is greater than 5 g/kg.

ORAL LD₅₀: The oral LD₅₀ in rats is greater than 5 g/kg.

INHALATION LG₅₀: The 4-hour inhalation LC₅₀ in rats is greater than 5.4 mg/l.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATIONDo not apply directly to water.

Groundwater Advisory: Do not apply around wells or where the water table (groundwater) is close to the surface or where the soils are very permeable, such as sandy loam.

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 container. Rinse thoroughly before discarding in trash.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

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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, Density of 20 lbs. or greater per cu. ft.

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****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

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

313 REPORTABLE INGREDIENTS:None

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: 1 REACTIVITY: 0 PROTECTION: -

NFPA CODES

FIRE: 0 HEALTH: 1 REACTIVITY: 0 SPECIAL: -

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REVISION SUMMARYNew MSDS

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

MANUFACTURER DISCLAIMERThis 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 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.

