

MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

Effective Date: 22-May-07
Product Code: 49015
MSDS: 006301

SPOTLIGHT* SPECIALTY HERBICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Spotlight* Specialty Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Brown liquid with no odor. May cause eye irritation and corneal injury. May cause skin irritation, even a burn. Repeated contact may cause drying or flaking of the skin.
EMERGENCY PHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

COMPONENT	CAS NUMBER	W/W%
Fluroxypyr	81406-37-3	26.2
1-Methyl-2-Pyrrolidinone	872-50-4	5.1
Naphthalene	91-20-3	<5.4
Balance		63.3

4. FIRST AID:

EYES: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

SKIN: Wash skin with plenty of water.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

INHALATION: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc.). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: 145°F (63°C)
METHOD USED: PMCC

FLAMMABLE LIMITS

LFL: Not determined
UFL: Not determined

EXTINGUISHING MEDIA: Foam, CO₂, or dry chemical.

FIRE & EXPLOSION HAZARDS: Foam fire-extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases and fumes will be formed.

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: Absorb small spills with dry material such as sand, ZORBALL, or dirt. Wash thoroughly after handling. Contain large spills by diking to keep out of sewers. Report large spills to Dow AgroSciences at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: See product label. Keep out of reach of children. Do not swallow. Avoid skin and eye contact. Avoid breathing mist or vapors. Store in original container with the lid tightly closed. Handle concentrate in ventilated area. Keep away from food, feedstuffs, and domestic water supplies. Wash thoroughly after handling.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINE(S):

1-Methyl-2-pyrrolidinone: AIHA WEEL is 10 ppm, Skin. Interim Dow AgroSciences Industrial Hygiene Guide is 500 ppm.

Naphthalene: ACGIH TLV is 10 ppm TWA, 15 ppm STEL, Skin, A4. OSHA PEL is 10 ppm TWA.

Fluroxypyr 1-methylheptyl ester: Dow AgroSciences Industrial Hygiene Guide is 10 mg/M³.

A 'skin' notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use a NIOSH approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration.

SKIN PROTECTION: When prolonged or frequently repeated contact could occur, use chemically protective clothing resistant to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on the operation.

EYE/FACE PROTECTION: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: 182°F (202°C)

VAPOR PRESSURE: Not determined

DENSITY: 0.984-0.995 @ 20°C or 8.2-8.3 lbs/gal

SOLUBILITY IN WATER: Not determined

SPECIFIC GRAVITY: 0.99 g/mL @ 25°C or 8.24 lbs/gal

APPEARANCE: Dark brown liquid

ODOR: None

FREEZE POINT: -10°C

pH: 5.5 (as 1% aqueous sol)

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) This product is stable under normal use and storage conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Avoid acids, oxidizing and base materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Under fire conditions, oxides of nitrogen, hydrogen chloride, and hydrogen fluoride may be produced.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYE: May cause moderate eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

SKIN: Brief contact is essentially non-irritating to skin. Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption in rabbits is >2,000 mg/kg. Did not cause allergic skin reactions when tested in guinea pigs.

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INGESTION: Low toxicity if swallowed. The oral LD₅₀ for rats is 3,738 mg/kg (males) and 3,162 mg/kg (females). Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

INHALATION: No adverse effects are anticipated from single exposure to vapor. The LC₅₀ for rats is >6.2 mg/L for 4 hours. Excessive exposure to solvent may cause respiratory irritation and central nervous system depression. May cause nausea or vomiting.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Effects have been reported on the following organs: bone marrow, kidney, liver and respiratory tract.

CANCER INFORMATION: Fluroxypyr did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): 1-Methyl-2-pyrrolidinone caused toxic effects to the fetus in laboratory animals at high dose levels with either mild or undetectable maternal toxicity. Fluroxypyr did not cause birth defects; however, in laboratory animals, other toxic effects to the fetus have been seen.

REPRODUCTIVE EFFECTS: Fluroxypyr did not interfere with reproduction in laboratory animal studies.

MUTAGENICITY: For the solvent, in-vitro genetic toxicity studies were negative in some cases and positive in other cases. For fluroxypyr, in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

ECOTOXICOLOGY:

Material is practically non-toxic to birds on an acute basis (LD₅₀ is >2,000 mg/kg in most sensitive species tested).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

For non-bulk shipments by all modes of transportation:
This material is not regulated for transport.

For bulk shipments by all land, rail and vessel:
NA1993/COMBUSTIBLE LIQUID, N.O.S./(CONTAINS NAPHTHALENE)/COMBUSTIBLE LIQUID/PG III/RQ(NAPHTHALENE)

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15. REGULATORY INFORMATION:

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Naphthalene	91-20-3	5.4%
1-methyl-2-Pyrrolidinone	872-50-4	5.1%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains a chemical(s) known to the State of California to cause cancer. The chemical is naphthalene (CAS # 91-20-3).

This product contains a chemical(s) known to the State of California to be a developmental toxin. The chemical is 1-methyl-2-Pyrrolidinone CAS # 872-50-4.

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
Naphthalene	91-20-3	NJ2 NJ3 PA1 PA3
1-methyl-2-Pyrrolidinone	872-50-4	NJ2 PA1

NJ2=New Jersey Environmental Hazardous Substance (present at > or = to 1.0%).

NJ3=New Jersey Workplace Hazardous Substance (present at > or = or equal to 1.0%).

PA1=Pennsylvania Hazardous Substance (present at > or = to 1.0%).

PA3=Pennsylvania Environmental Hazardous Substance (present at > or = to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS Number	RQ	% in Product
Naphthalene	91-20-3	100 lbs.	5.4

RCRA Categorization: USEPA Hazardous Waste #
Naphthalene = U165

16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 2, 3, 11, 12, 13, 15
Reference: DR-0328-2766
Replaces MSDS Dated: 6/3/04
Document Code: D03-197-003
Replaces Document Code: D03-197-002

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.