

MATERIAL SAFETY DATA SHEET



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

Effective Date: 9/12/00
Product Code: 72846
MSDS: 006597

HORNET* WDG HERBICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Hornet* WDG Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Potassium Salt of Clopyralid (50 wt% acid equivalent)	CAS# 058509-83-4	60.0%
Flumetsulam: N-(2,6-difluoro-phenyl)-5-methyl-1,2,4-triazolo-(1,5a)-pyrimidine-2-sulfonamide	CAS# 098967-40-9	18.5%
Other Ingredients, Total		21.5%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Hazardous Material. Tan to brown granule. May cause severe eye irritation with corneal injury. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg. Oral LD₅₀ for rats is >5000 mg/kg. Aerosol inhalation LC₅₀ is >5.21 mg/L for 4 hours.

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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 severe irritation with corneal injury.

SKIN: Prolonged exposure is not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The LD₅₀ for skin absorption in rabbits is >5000 mg/kg. Did not cause allergic reactions when tested in guinea pigs.

INGESTION: Single dose oral toxicity is extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations. The oral LD₅₀ for rats is >5000 mg/kg.

INHALATION: Single prolonged (hours) inhalation exposure is not likely to cause adverse effects. The aerosol LC₅₀ for rats is >5.21 mg/L for 4 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For clopyralid and flumetsulam, in animals, effects have been reported on the following organs: kidney and liver. Observations in animals include lethargy.

CANCER INFORMATION: The active ingredients did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): Clopyralid caused birth defects in test animals, but only at greatly exaggerated doses that were severely toxic to the mothers. No birth defects were observed in animals given clopyralid at doses several times greater than those expected during normal exposure. For flumetsulam, birth defects are unlikely. Even exposures having an adverse effect on the mother should have no effect on the fetus.

REPRODUCTIVE EFFECTS: Clopyralid and flumetsulam, in animal studies, have been shown not to interfere with reproduction.

4. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

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5. FIRE FIGHTING MEASURES:

FLASH POINT: Not applicable - granular material

FLAMMABLE LIMITS: LFL: Not applicable
UFL: Not applicable

EXTINGUISHING MEDIA: Water fog, foam, CO₂, dry chemical

FIRE AND EXPLOSION HAZARDS: Toxic, irritating gases may be formed under fire conditions. Do not allow product-contaminated water from fire-fighting to enter water supplies.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS: For small spills, contain, sweep-up and place in a suitable container for disposal. Report large spills to Dow AgroSciences at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not get in eyes or on clothing. Avoid skin contact. Avoid breathing vapors or spray mist. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Store in original container in a dry area.

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): 3,6-Dichloropicolinic acid (clopyralid): Dow AgroSciences Industrial Hygiene Guide is 10 mg/M³.

Flumetsulam: Dow AgroSciences Industrial Hygiene Guide is 10 mg/M³.

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

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline.

SKIN PROTECTION: No precautions other than clean body-covering clothing should be needed.

EYE PROTECTION: Use chemical goggles.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: Not applicable

VAPOR PRESSURE: Not determined

VAPOR DENSITY: Not determined

SOLUBILITY IN WATER: Water dispersible

SPECIFIC GRAVITY: Not applicable

APPEARANCE: Tan to brown granules

MELTING POINT: 149-151°C, 300-304°F (clopyralid)

ODOR: No appreciable odor

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable at normal handling and storage conditions.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Clopyralid can react violently with aluminum above 110°C, 230°F when water is present. Avoid contact with aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic, irritating gases may be formed under fire conditions, including nitrogen oxides and hydrogen chloride.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

MUTAGENICITY: For the active ingredients, in-vitro and animal mutagenicity studies were negative.

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12. ECOLOGICAL INFORMATION:

Do not apply directly to water, to 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.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Wastes resulting from the use of this product may be disposed of on site according to label use directions or at an approved waste disposal facility. Follow all local, state and federal requirements for disposal.

14. TRANSPORT INFORMATION:

For DOT regulatory information, if required, consult transportation regulations, product-shipping papers, or contact your Dow AgroSciences representative.

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: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

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

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
Proprietary Ingredient	Proprietary	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	2
Flammability	1
Reactivity	1

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 3, 4, 7, 8 & 15
Reference: DR-0362-3787
Replaces MSDS Dated: 11/30/99
Document Code: D03-099-003
Replaces Document Code: D03-099-002

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