

MATERIAL SAFETY DATA SHEET

PRODUCT : Halosulfuron-methyl 75% WG

PRODUCT DESIGNATION : Herbicide

Section 1. Product & Company Identification

Common Name : Halosulfuron-methyl

Grade : Formulation

Active Ingredient : Halosulfuron-methyl

Chemical Name of Active Ingredient (IUPAC) : 3-chloro-5-[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-1-methyl-1H-pyrazole-4-carboxylic acid

Chemical Family of A. I. : Herbicide

Molecular Formula of A. I. : C₁₃H₁₅ClN₆O₇S

Molecular Mass of A. I. : 434.81 g/mol

Manufacturer & Supplier : **M/s United Chemicals**

Head office: B-371, 1st Floor, Meera Bagh, New Delhi,

Factory: 15/1, 15/2, 15/3, Industrial Estate, Vidisha, (M.P)

Telephone Number : +91-11-25258770

Section 2. Composition / Information on Ingredients

| <u>Name of Components</u> | <u>Concentration% w/w</u> |
|---------------------------|---------------------------|
| Halosulfuron-methyl | 75.00% w/w |
| Inert Ingredients | 25.00% w/w |
| TOTAL | 100.00% w/w |

Section 3. Hazards Identification

Harmful if swallowed ,Causes eye irritation

May form flammable dust-air mixture. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 4. First Aid Measures

Emergency Overview

IF SWALLOWED: Immediately call a doctor or poison control center for treatment advice. Remove visible particles from mouth. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Section 5. Fire Fighting Measures

Flash Point: Not available

Fire and Explosion Hazards: Thermal decomposition may produce hazardous gasses and/or materials.

Extinguishing Medium: Carbon dioxide, dry chemical, foam, water fog.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

Fire Fighting Instructions: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

Section 6. Accidental Release Measures

Personal Protection : Wear protective equipment as described in Section 8 of this document. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Spill Cleanup: Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

Section 7. Handling & Storage

Handling: Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

Storage: Do not contaminate water, food or feed by storage or disposal. Store in a dry and secure location.

Section 8. Exposure Control, Personal Protection

Engineering Controls: Ensure adequate ventilation, especially in confined areas. Facilities storing or utilizing this product should be equipped with an eye wash station and safety shower.

Protective Clothing: Wear long sleeved shirt and long pants, and shoes plus socks.

General: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and was PPE separately from other laundry.

Section 9. Physical and Chemical Properties

| | |
|---------------------------|------------------------------|
| Appearance / state | : white granules ,Solid |
| Colour | : white |
| Odour | : Nearly odorless |
| Flash point | : Not Applicable |
| Auto Ignition Temp | : Not flammable |
| Density | : 0.55-0.6 g/cm ³ |
| Water solubility | : Soluble in water |
| pH | : 9-10 (1% aqueous) |

Section 10. Stability & Reactivity

Conditions To Avoid: Heat, flames, sparks, moisture

Chemical Stability : Stable under normal use and storage conditions

Materials to Avoid : Oxidizing agents, acids

Hazardous Decomposition Product : Combustion may release oxides of carbon, nitrogen, and sulfur as well as hydrogen chloride gas

Section 11. Toxicological Information

Acute Oral Toxicity LD₅₀ for rats : >1,287 mg/kg

Acute Dermal Toxicity LD₅₀ Rabbit : >5,000 mg /kg

Acute Inhalation LC₅₀ (4h) for male and female rats : >5.2 mg/l air

Eye Irritation Rabbit moderately eye irritating

Skin Irritant Rabbit : Slightly irritant

Skin sensitization Guinea pig : Not a skin sensitizer

Section 12. Ecological Information

Toxicity to Bird : LC₅₀(5 d) dietary, Mallard duck : > 2250 mg/l

Toxicity to fish : LC₅₀(96 h) Rainbow trout: > 118 mg/l

Daphnia magna : EC₅₀ (48h) : 107 mg/l

Toxicity to Algae : EC₅₀ (5D) green : 0.0053 mg/l

Toxicity to Honey bee : LD₅₀ (48 h) Apis mellifera : > 100 µg/bee

Section 13. Disposal Consideration

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for Guidance.

CONTAINER DISPOSAL: Non refillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

Section 14. Transport Information

Shipping name : Environmentally Hazardous Substance, Solid, N.O.S.
(Halosulfuron-methyl)

Class : 9

Packing group : III

UN number : 3077

Marine pollutant : Yes

Section 15. Regulatory Information

FIFRA – This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

SARA Title III – Section 302 Extremely Hazardous Substances Not listed

SARA Title III – Section 311/312 Hazard Categories Immediate

SARA Title III – Section 312 Threshold Planning Quantity The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients Not listed

Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division : UNITED CHEMICALS, SAFETY DIVISION