

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name : Halosulfuron Methyl 97% TC
Chemical Name : 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-1-methylpyrazole-4-carboxylate
Type : Herbicide

2. Composition / Information on ingredients

Chemical Name	CAS#	Percent or content (w/w)
Halosulfuron Methyl	100784-20-1	97.00 %
Inerts	-	3.0 %

3. Health Hazards Identification

Eye contact : Non-irritant to mucous membrane of eyes of rabbits.
Skin contact : Non-irritant to skin of rabbits.
Ingestion : Harmful if swallowed.
Environment : Dangerous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First Aid Measures

Eyes : Dangerous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Skin : Carefully remove contaminated clothing. Wash affected area with soap and water. Seek medical aid if required.
Ingestion : If the material was swallowed and signs of toxicity are severe, induce vomiting. Keep the person calm and comfortable and obtain medical assistance as soon as possible.

Inhalation If inhaled, remove to fresh air and keep at rest. Obtain medical aid if required.

5. Fire Fighting Measures

Flash point Non flammable

Special exposure hazards Combustion or thermal decomposition will evolve toxic and irritant vapours.

Suitable extinguishing media If product is involved in a fire, use water spray, foam, dry powder, carbon dioxide or sand.

Fire fighting precaution Do not breathe fumes. Wear self contained breathing apparatus.

Fire fighting guidance Whenever hexaconazole is involved in a major fire, advise the fire service to wear protective clothing and breathing apparatus. Inform the fire service and other relevant authorities that Hexaconazole is toxic to aquatic organisms, and that water should be used only to cool unaffected stock. In this way, the accumulation of polluted run-off from the site is prevented.

6. Accidental Release Measures

Personal precaution Avoid contact with spilled material or contaminated surfaces. If ordinary clothing becomes contaminated remove it immediately. When dealing with the spillage do not eat, drink or smoke and wear personal protective clothing.

Environmental precautions Keep people and animals away. Prevent entry into drains, sewers and watercourses.

Methods and material for containment and cleaning up Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Wash the spillage area with water. Washings must be prevented from entering surface water drains.

7. Handling and Storage

- Handling** Wear chemically impervious gloves such as neoprene or nitrile. Wear safety glasses, goggles or face shield. Mechanical ventilation should be used when handling this product in enclosed spaces. Read and observe all precautions and instructions on the label.
- Storage** Store in original containers, upright and closed. Store in areas that are cool, dry and well ventilated. Store away from seeds, fertilizers and animal feed stuff.

8. Exposure Controls/Personal Protection

- Engineering controls** Mechanical ventilation should be used when handling this product in closed spaces.
- Respiratory protection** NIOSH approved organic vapor respirator in absence of mechanical ventilation.
- Eye protection** Wear safety goggles with imperforated side shield and face shield.
- Hand Protection** Wear chemical resistant gloves.
- Skin Protection** Avoid contact with skin. Wear apron, boots and full protective suit.
- Environmental exposure controls** Keep away from food, drink and animal feed stuff. This material and its container must be disposed off as hazardous waste. Avoid release to the environment.

9. Physical and Chemical Properties

- Appearance** Off white
- Physical state** Solid
- Odour** Specific
- pH** 7.5-8.5

10. Stability and Reactivity

Stability	Stable for two years at ambient conditions
Conditions to avoid	Avoid excessive heat and flame
Incompatibilities	Strong acidic / alkaline materials
Materials to avoid	None under normal condition of use
Hazardous decomposition Products	Thermal decomposition may release ammonia, carbon monoxide and carbon dioxide and oxides of nitrogen.

11. Toxicological Information

Acute Oral Toxicity	LD ₅₀ (rats) >5000 mg/kg
Acute Dermal Toxicity	LD ₅₀ (Rats) > 5000 mg/kg b.w
Acute Inhalation	LC ₅₀ (rats): >5.9 mg/l
Eye Irritation	Rabbit: Mild Irritant
Skin Irritant	Rabbit: Mild irritant
Skin sensitization	Non sensitizer

12. Ecological Information

Birds - Acute LD₅₀:	>2250 mg/kg.
Aquatic – Acute LC₅₀:	(96hrs) for bluegill sunfish >118
Bees:	LD50(contact) >100 µg/bee
Worms:	LC50 for earthworms >1000 mg/kg soil

13. Disposal Considerations

Waste Disposal Method	Do not empty into drains or waterways. Disposal of product would usually be by incineration in an appropriate licensed commercial incinerator. Advice may be obtained from local waste regulation authorities.
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Container Disposal method Lightly contaminated packaging may be accepted for landfill, otherwise incineration will be required.

14. Transport Information

Proper Shipper Name : Environmentally hazardous substance, solid, N.O.
Class : 9
UN No. : 3077
Packing Group : III

15. Regulatory Information

Symbol	Xn	Harmful
Special Risks (R-Phrases)	R22	Harmful if swallowed.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Safety Advice (S- Phrases)	S 2	Keep out of the reach of children
	S24/25	Avoid contact with skin and eyes.
	S36/37	Wear suitable protective clothing and gloves
	S57	Use appropriate containment to avoid environmental contamination.
	S60	This material and its container must be disposed of as hazardous waste.
	S61	Avoid release to the environment. Refer to special instructions/safety data sheets.
International WHO Toxicity Classification	IV	Non-toxic

16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.