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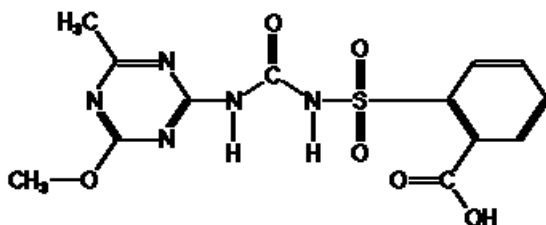
MATERIAL SAFETY DATA SHEET

MSDS No: MSDS/ACE/FG-016

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ProductName	: Metsulfuron MethylTechnical
IUPAC Name	: methyl 2-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl) benzoate.
Mole formula	: C ₁₄ H ₁₅ N ₅ O ₆ S
Mole weight	: 381.4
Uses	: Herbicide
Manufacturer / Supplier	: Bharat Rasayan Limited 1501, Vikram Tower, Rajendra Place, New Delhi – 110008, INDIA
Emergency Phones	: +91-11-43661120,1104 Fax 43661100

Structural Formula:



Chemical Name: Methyl
2-[3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)ureidosulphonyl]benzoate
Form: Powder
Color: Off-white to yellowish powder
Odor: Slight odor
CAS No: 74223-64-6

2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Metsulfuron-methyl	1071-83-6	95.0
Other ingredients		5.0

3. Hazards Identification

Classification of risks of the chemical product:

Dangers for the health of the people

Effects of one on acute exposure (short time): Information non-available

Inhalation: May be a mechanical irritant.

Contact with the skin: Repeated dermal contact with the active ingredient may cause skin irritation with itching, burning, redness, swelling or rash..

Contact with the eyes: May cause eye irritation with tearing, pain or blurred vision.

Effects of one on chronic exhibition (long time): Information non-available.

Dangers for the environment: To avoid that the product reaches the water obstacles

Dangers special are of the product: None if it is used suitably.

4. First Aid Measures

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Ingestion: No specific intervention is indicated as the product is not likely to be hazardous by ingestion. Consult a physician if necessary.

Inhalation: No specific intervention is indicated as the product is not likely to be hazardous by inhalation. Consult a physician if necessary. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Antidote: None reported.

5. Fire and Explosion Data

Extinguishing media: Water Spray, Foam, Dry Chemical, CO₂.

Specific hazards: Not available.

Recommended protective clothing: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

6. **Accidental Release Measures**

Personal precautions: Ventilation, gloves, protective clothing, face shield. Avoid inhalation of spray mist.

Environmental precautions: Prevent spillage into the soil or aquatic environment.

Spill procedures: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Disposal procedures: Triple rinse containers and add residue to spray tank. Burn empty container if circumstances, especially wind direction permit, otherwise crush and bury in landfill.

7. Handling And Storage

Handling:

void breathing vapors or mist. Avoid breathing dust. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

Storage:

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

8. Exposure Controls / Personal Protection

Engineering control measures: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Respiratory protection:

In case of spray: ventilation, local exhaust or breathing protection.

Eye Protection: Wear appropriate protective eyeglasses or chemical safety goggles.

Hand protection: Wear appropriate gloves to prevent skin exposure.

Hygiene measures: Thoroughly wash hands after work, before eating or smoking.

9. Physical And Chemical Properties

Physical state and appearance: Off-white to yellowish powder

Odor: odorless

Melting point: 162°C

Flashpoint: Not highly flammable

Bulk density: 1.45 g/ml (25°C)

Vapour pressure: 1.10×10^{-07} (25°C)

Solubility in water: 2790 mg/l, in organic solvents: n-Hexane: 0.58mg/l, Acetone: 37000 mg/l, Methanol: 7630 mg/l (all at 20°C)

10. Stability And Reactivity

Stability: Stable under normal temperatures and pressures.

Stability conditions to avoid: Excess heat, and incompatible materials.

Incompatibilities with other material: None reasonably foreseeable

Hazardous Decomposition products: Under fire conditions may produce gases such as oxides of carbon, hydrogen, nitrogen and sulfur.

11. Toxicological Information

Skin irritation: Non-irritating to rabbit Eye

irritation: Slightly irritating to rabbit

Sensitization: Not a sensitizer to Guinea pig.

Oral to Rat: >5000 mg/kg.

Dermal to Rabbit: >2000 mg/kg.

Inhalation to Rat: LC₅₀: 5.0 mg/L.

12. Ecological Information

Aquatic Organisms:

LC₅₀ for fish: Bluegill: >150mg/l (96h), Rainbow trout: 150mg/l (96h).

LC₅₀ for bird: Bobwhite: 2510 mg/kg, Mallard duck: 2510 mg/kg.

EC₅₀ for Daphnia: >150 mg/l (48h)

LD₅₀ for Honeybee: >25µg/kg (48h)

LC₅₀ for Earthworms: >1000mg/kg (14d).

13. Disposal Considerations

Product

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Container

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not available.

15. Regulatory Information

Not available.

16. OTHER INFORMATION

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Prepared by: Bharat Rasayan Limited: EHS Department

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