



MATERIAL SAFETY DATA SHEET

PRODUCT : Metsulfuron Methyl Technical

PRODUCT DESIGNATION : Herbicide

Section 1. Product & Company Identification

Common Name : Metsulfuron Methyl

Grade : Technical

Active Ingredient : Metsulfuron Methyl

Chemical Name of Active Ingredient (IUPAC) : methyl2-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)carbamoylsulfamoyl]benzoate

Chemical Family of A. I. : sulfonylurea

Molecular Formula of A. I. : C₁₄H₁₅N₅O₆S

Molecular Mass of A. I. : 381.4

Manufacturer & Supplier : **M/s PERFECT SOLUTIONS**
Office Add: B-371, Paschim Vihar, New Delhi - 110063 (India)
Factory Add: 15/1, 15/2, 15/3 Industrial Estate, Vidisha - 464001 (M.P)

Telephone Number : +91 8375844625

Section 2. Composition / Information on Ingredients

Metsulfuron Methyl	96.00 % w/w
Other components	04.00 % w/w
Total	100.00% w/w

Section 3. HAZARDS IDENTIFICATION

Emergency Overview: Harmful if swallowed. Potential Health Effects: The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin of eyes and to prevent inhalation. Compound is Non-hazardous, Non-Toxic/Non-Flammable.



Section 4. First Aid Measures

Eyes : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Skin : Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion : Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation : Remove from exposure and move to fresh air immediately.

Section 5. Fire Fighting Measures

General Information : As in any fire, wear a self-contained breathing apparatus in Pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. During a fire, irritating and highly Toxic gases may be generated by thermal decomposition or combustion.

Extinguishing media : In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Section 6. Accidental Release Measures

General Information Spills/Leaks : Use proper personal protective equipment as indicated in Section 8.

Spills : Clean up spills immediately, observing precaution in the protective Equipment section. Sweep up, then place into a suitable container for disposal.

Section 7. Handling & Storage

Handling Storage : Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Store in a well closed container.

Section 8. Exposure Control, Personal Protection



Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process, local exhaust ventilation, or other engineering controls to control airborne levels.

Personal Protective Equipment:

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European standard EN 149 approved full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

Section 9. Physical and Chemical Properties

Appearance / state	:	Off-white solid crystals
Colour	:	Off-white
PH	:	7
Odour	:	Faint-ester odour
Melting point	:	162°C
Vapour pressure	:	3.3×10^{-7} mPa (25°C)
Density	:	1.447 20°C
Water Solubility	:	0.548 g/l

Section 10. Stability & Reactivity

Chemical Stability : Stable under normal temperature and pressures

Conditions to Avoid : Incompatible materials, strong oxidants

Incompatibilities with other materials: Strong oxidizing agents, strong bases.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Hazardous Polymerization: Has not been reported.

Section 11. Toxicological Information

Acute Oral Toxicity- LD₅₀	Rat: >5000 mg/kg bw
Acute Dermal Toxicity- LD₅₀	Rat: > 2,000 mg/kg body weight
Acute Inhalation - LD₅₀	Rat: > 6.3 mg/l air



Eye irritation	Not Irritating to eyes
Skin Irritation	Not a skin irritating
Skin Sensitization	Not a skin sensitizer

Section 12. Ecological Information

Toxicity to Fishes	Rainbow trout >131 mg/l Blurgill sunfish >119 mg/l
Toxicity to Bees	LD ₅₀ >44.3 µg/bee
Toxicity to Birds	Bobwhite LD ₅₀ : >5620 mg/kg Mallard duck LD ₅₀ : >2510 mg/kg
Toxicity to Daphnia	EC ₅₀ >120 mg/l

Section 13. Disposal Consideration

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14. Transport Information

IMDG Classification

Shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Metsulfuron Methyl)
Class	: 9
Packing group	: III
UN number	: 3077
Marine pollutant	: Yes

Section 15. Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazards Symbols: XN

Risk Phrases : R22 Harmful if swallowed

Safety Phrases : WGK (Water Danger/Protection)

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 resented 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 on 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 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. Accordingly, no guarantee or warrantee expressed or implied is made by PERFECT SOLUTIONS, as to the results to be obtained based upon the user's use of the information, nor does PERFECT SOLUTIONS, assume any liability arising out of user's use of the information.

Safety Division : PERFECT SOLUTIONS, SAFETY DIVISION