1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name: Metsulfuron-methyl
Product Code: SC-250409

Recommended use of the chemical and restrictions on use
For research use only. Not intended for diagnostic or therapeutic use.

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification
Acute toxicity - Dermal: Category 4
Acute toxicity - Inhalation (Vapors): Category 3

Label elements
Signal word: Danger
Hazard statements: May be harmful if swallowed
Harmful in contact with skin
Toxic if inhaled

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Hazards not otherwise classified (HNOC): Not applicable

Details of the supplier of the safety data sheet
Santa Cruz Biotechnology, Inc.
10410 Finnell Street
Dallas, TX 75220
831.457.3800
800.457.3801
scbt@scbt.com

Emergency telephone number
Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)
Other Information

Other hazards

Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

NFPA Health hazards 0 Flammability 1 Stability 0 Physical and chemical properties -

HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal protection -

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metsulfuron-methyl</td>
<td>74223-64-6</td>
<td>&gt;98</td>
<td>&gt; 5 g/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit) &gt; 2 g/kg (Rabbit)</td>
<td>&gt; 5 g/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures

General advice Consult a physician if necessary. Remove to fresh air.
Eye contact Wash with plenty of water.
Skin Contact Wash skin with soap and water.
Inhalation Remove to fresh air if breathing is difficult, give oxygen if not breathing, give artificial respiration.
Ingestion Never give anything by mouth to an unconscious person. Clean mouth with water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.
Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx).

Explosion data

Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH.
for firefighters (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions
Environmental precautions See Section 12 for additional Ecological Information. Prevent product from entering drains. Should not be released into the environment.

Methods and material for containment and cleaning up
Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature.
Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls
Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment
Eye/face protection Wear safety glasses with side shields (or goggles).
Skin and Body Protection Wear protective gloves and protective clothing.
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES
Physical State: Solid
Appearance: powder
Odor: sweet

Properties and Values:
- pH: No information available
- Melting point/freezing point: 155 °C
- Boiling point: 561.64 °C
- Flash point: No information available
- Liquid Density: 1.5 g/cm³
- Evaporation rate: No information available
- Upper flammability limits: No information available
- Lower flammability limit: No information available
- Vapor pressure: No information available
- Vapor density: No information available
- Specific gravity: No information available
- Water solubility: No information available
- Solubility in other solvents: No information available
- Partition coefficient: 2.2
- Autoignition temperature: No information available
- Decomposition temperature: No information available
- Kinematic viscosity: No information available
- Explosive properties: No information available
- Oxidizing properties: No information available

10. STABILITY AND REACTIVITY

Reactivity: Not applicable
Chemical stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: None under normal processing.
Hazardous polymerization: No information available.
Conditions to avoid: Extremes of temperature and direct sunlight.
Incompatible materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon oxides. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
- Inhalation: No data available.
- Eye contact: No data available.
- Skin Contact: No data available.
- Ingestion: No data available.

Information on toxicological effects:
- Symptoms: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
- Chronic Toxicity: No information available.

Numerical measures of toxicity - Product Information
- Unknown acute toxicity: No information available
- The following values are calculated based on chapter 3.1 of the GHS document:
  - ATEmix (oral): 5000 mg/kg
  - ATEmix (dermal): 2000 mg/kg
  - ATEmix (inhalation-vapor): 5 mg/l
12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations. Should not be released into the environment.

Contaminated packaging
Do not reuse container.

14. TRANSPORT INFORMATION

DOT

UN/ID no  UN3077
Hazard Class  9
Packing Group  III
Proper shipping name  Environmentally hazardous substance, solid, n.o.s.
Description  UN3077, Environmentally hazardous substance, solid, n.o.s. (Metsulfuron-methyl), 9, III, Marine pollutant
Emergency Response Guide Number  171

IMDG

UN/ID no  UN3077
Hazard Class  9
Packing Group  III
Proper shipping name  Environmentally hazardous substance, solid, n.o.s.
Description  UN3077, Environmentally hazardous substance, solid, n.o.s. (Metsulfuron-methyl), 9, III, Marine pollutant
Special Provisions  274, 335, 966, 967, 969
EmS-No  F-A, S-F

IATA

UN/ID no  UN3077
Hazard Class  9
Packing Group  III
Proper shipping name  Environmentally hazardous substance, solid, n.o.s.
Description  UN3077, Environmentally hazardous substance, solid, n.o.s. (Metsulfuron-methyl), 9, III
ERG Code  9L

15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists
China (IECSC)
**Chemical name** | **TSCA** | **DSL** | **NDSL** | **EINECS** | **ELINCS** | **ENCS** | **IECSC** | **KECL** | **PICCS** | **AICS**
---|---|---|---|---|---|---|---|---|---|---
Metsulfuron-methyl | - | - | - | - | - | X | - | - | - | -

**X - Listed**
- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IECSC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

- Acute health hazard: Yes
- Chronic Health Hazard: No
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive hazard: No

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**US State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**
This product does not contain any substances regulated by state right-to-know regulations.

**16. OTHER INFORMATION**

*Revision note*  No information available

**Disclaimer**
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

*End of Safety Data Sheet*