1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Code</th>
<th>2121101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>HALOMAX 75 HERBICIDE</td>
</tr>
<tr>
<td>Synonyms</td>
<td>1H-Pyrazole-4-Carboxylic Acid, 3-Chloro-5-[[[(4,6-Dimethoxy-2-Pyrimidinyl)Amino]Carbonyl][Amino]Sulfonyle]-1-Methyl-, Methyl Ester (9CI)</td>
</tr>
<tr>
<td>Formula</td>
<td>C13H15ClN6O7S (Halosulfuron Methyl)</td>
</tr>
<tr>
<td>CAS Number</td>
<td>100784-20-1 (Halosulfuron Methyl)</td>
</tr>
<tr>
<td>EPA Registration Number</td>
<td>2749-528</td>
</tr>
<tr>
<td>Contact</td>
<td>ACETO AGRICULTURAL CHEMICALS CORP.</td>
</tr>
<tr>
<td></td>
<td>One Hollow Lane</td>
</tr>
<tr>
<td></td>
<td>Lake Success, NY 11042-1215</td>
</tr>
<tr>
<td></td>
<td>Phone: (516) 627-6000</td>
</tr>
<tr>
<td></td>
<td>Fax: (516) 627-6093</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:regulatory@aceto.com">regulatory@aceto.com</a></td>
</tr>
<tr>
<td>ChemTrec Emergency Telephone</td>
<td>1-800-424-9300</td>
</tr>
<tr>
<td>Numbers</td>
<td>1-703-527-3887</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Emergency Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful if swallowed. May be harmful if inhaled. May be harmful in contact with skin. Irritating to eyes. May cause irritation of the mucous membranes. May cause irritation of respiratory tract. May cause skin irritation.</td>
</tr>
<tr>
<td>Appearance</td>
</tr>
<tr>
<td>Physical State</td>
</tr>
<tr>
<td>Odor</td>
</tr>
<tr>
<td>OSHA Regulatory Status</td>
</tr>
<tr>
<td>Mexico - Grade</td>
</tr>
<tr>
<td>Potential Health Effects</td>
</tr>
<tr>
<td>Principle Routes of Exposure</td>
</tr>
</tbody>
</table>
Acute Effects

Eyes
Slight irritation. Avoid contact with eyes.

Skin
May be harmful by skin contact. Substance may cause slight skin irritation. Avoid contact with skin.

Inhalation
May be harmful if inhaled. May cause irritation of the mucous membranes. May cause irritation of respiratory tract.

Ingestion
Harmful if swallowed.

Additional Acute Effects
None reasonably foreseeable.

Chronic Effects
Avoid repeated exposure.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
Not available

Interactions with Other Chemicals
Not available

Potential Environmental Effects
Refer to approved EPA Label.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number 100784-20-1 (Halosulfuron Methyl)

Formula C13H15ClN6O7S (Halosulfuron Methyl)

Hazardous Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halosulfuron Methyl</td>
<td>100784-20-1</td>
<td>75</td>
</tr>
</tbody>
</table>

Non-hazardous Components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Ingredients</td>
<td>N/A</td>
<td>25</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General Advice
Show this safety data sheet to the doctor in attendance.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or Poison Control Centre immediately.

Skin Contact
Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use. Call a physician or Poison Control Centre immediately.
Inhalation  Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or Poison Control Centre immediately.

Ingestion  Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Centre immediately.

Notes to Physician  Treat symptomatically

Protection of First-aiders  Use personal protective equipment. Avoid contact with skin, eyes and clothing.

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties**  Not available

**Suitable Extinguishing Media**  Water spray. Carbon dioxide (CO2). Dry powder. Foam.

**Unsuitable Extinguishing Media**  Not available

**Hazardous Combustion Products**  Thermal decomposition or combustion may produce hazardous gases and/or materials.

**Explosion Data**

- **Sensitivity to mechanical impact**  Not available
- **Sensitivity to static discharge**  Not available

**Specific Hazards Arising from the Chemical**  Keep product and empty container away from heat and sources of ignition

**Protective Equipment and Precautions for Firefighters**  As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA**

- **Health**  1
- **Flammability**  0
- **Instability**  0

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**  Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

**Environmental Precautions**  Local authorities should be advised if significant spillages cannot be contained. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

**Methods for Containment**  Not available

**Methods for Cleaning up**  Evacuate personnel to safe areas. Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

**Other Information**  Not applicable
7. HANDLING AND STORAGE

Handling
Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Do not breathe vapours/dust. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Avoid repeated exposure.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Protect from moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

- **Eye/face Protection**
  Tightly fitting safety goggles.

- **Skin Protection**
  Protective gloves. Long sleeved clothing. Shoes plus socks.

- **Respiratory Protection**
  In case of insufficient ventilation wear suitable respiratory equipment.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. For additional information consult the EPA Pesticide Label.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light tan, Powder</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, Soapy</td>
</tr>
<tr>
<td>pH</td>
<td>4.8(1%aq. sol) (@22°C)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>168 - 171°C</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>Lower Not available, Upper Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>36.1 - 38.2 lbs/ft3</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Reactivity in Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>434.85</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Chemical Stability
Stable under normal conditions.

Conditions to Avoid
Heat, flames and sparks. Avoid moisture.

Incompatible Materials
Reducing agents. Acids.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), Sulfur Oxides, Hydrogen chloride gas.

Possibility of Hazardous Reactions
None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
LD50 Oral: 1,287 mg/kg (rat)
LD50 Dermal: > 5,000 mg/kg (rat)
LC50 Inhalation: > 5.7 mg/L 4H (rat)

Chronic Toxicity
Carcinogenicity
There are no known carcinogenic chemicals in this product

Irritation
Skin, rabbit: Slightly; Eye, rabbit: Moderately

Corrosivity
Not available

Sensitization
Not available

Neurological Effects
Not available

Mutagenic Effects
Not available

Reproductive Effects
Not available

Developmental Effects
Not available

Target Organ Effects
Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Refer to approved EPA Label.

Persistence / Degradability
Not available

Bioaccumulation / Accumulation
Not available
13. DISPOSAL CONSIDERATIONS

Waste Disposal Method
Dispose of in accordance to EPA Pesticide Label Instructions.

Contaminated Packaging
Dispose of in accordance to EPA Pesticide Label Instructions.

US EPA Waste Number
Not available

14. TRANSPORT INFORMATION

DOT
Not regulated

TDG
Not regulated

MEX
Not regulated

ICAO
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

RID
Not regulated

ADR
Not regulated

ADN
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>U.S.A. (TSCA)</th>
<th>Canada (DSL)</th>
<th>EU (EINECS)</th>
<th>EU (ELINCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not Comply</td>
<td>Does not Comply</td>
<td>Does not Comply</td>
<td>Does not Comply</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>U.S.A. (TSCA)</th>
<th>Canada (DSL)</th>
<th>EU (EINECS)</th>
<th>EU (ELINCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halosulfuron Methyl</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other Ingredients</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Japan (ENCS)</th>
<th>China</th>
<th>Korea (KECL)</th>
<th>Philippines (PICCS)</th>
<th>Australia (AICS)</th>
</tr>
</thead>
</table>
This material as a whole is exempt from the TSCA Inventory // FIFRA Regulated Pesticide

USA
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 Hazardous Categorization
- Acute Health Hazard: Yes
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any HAPs.

State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know
Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
WHMIS Hazard Class
Not determined

16. OTHER INFORMATION

Prepared By: Environmental Health and Safety, Regulatory Affairs
Preparation Date: 05-Jan-2009
Revision Date: 09-Jan-2009
Revision Summary: Not available
Disclaimer
The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation,
disposal and release and is not to be considered as 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 material or in any
process, unless specified in the text.

End of MSDS