Stalwart Herbicide
Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Date of issue: 05/26/2015
Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form: Mixture
Product Name: Stalwart Herbicide
Other means of identification: EPA Reg. No. 60063-24

1.2. Intended Use of the Product
Use of the substance/mixture: Herbicide

1.3. Name, Address, and Telephone of the Responsible Party
Manufacturer
Sipcam Agro USA, Inc.
2525 Meridian Parkway, Suite 350
Durham, NC 27713
T 919-226-1195

1.4. Emergency Telephone Number
Emergency Number: (800) 424-9300 CHEMTREC (transportation and spills)
(800) 900-4044 Poison Control Center (human health)
(800) 345-4735 ASPCA (animal health)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
Classification (GHS-US)
Aquatic Acute 2 H401

2.2. Label Elements
GHS-US Labeling
Hazard Statements (GHS-US): H401 - Toxic to aquatic life.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards
No additional information available

2.4. Unknown Acute Toxicity (GHS-US)
10.9% of the mixture consists of ingredient(s) of unknown acute toxicity. of the mixture consists of ingredients of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metolachlor</td>
<td>(CAS No) 51218-45-2</td>
<td>86.35</td>
<td>Aquatic Acute 1, H400</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures
First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area.
First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes.
First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a physician or poison control center immediately.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/Injuries: None expected under normal conditions of use.
Symptoms/Injuries After Inhalation: Prolonged exposure to liquid may cause a mild irritation. Symptoms may be delayed.
Symptoms/Injuries After Skin Contact: May cause an allergic reaction in sensitive individuals. May cause skin irritation.
Symptoms/Injuries After Eye Contact: May cause eye irritation.
Symptoms/Injuries After Ingestion: May be harmful if swallowed.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Alcohol foam, carbon dioxide, dry chemical, water spray, fog. Use extinguishing media appropriate for surrounding fire.
Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard: Not considered flammable but may burn at high temperatures.
Explosion Hazard: Product is not explosive.
Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters
Firefighting Instructions: Exercise caution when fighting any chemical fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other Information: Do not allow run-off from fire fighting to enter drains or water courses. De-contaminate equipment or materials involved in pesticide fires.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Handle in accordance with good industrial hygiene and safety practice.

6.1.1. For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

6.1.2. For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).
Emergency Procedures: Ventilate area.

6.2. Environmental Precautions
Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
Storage Area: Store locked up.

7.3. Specific End Use(s) Herbicide

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).
8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.


Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Use chemically protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Amber. Light brown.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.94</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>83 °C</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1 @20°C</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>107.4 cSt @20°C</td>
</tr>
<tr>
<td>Oxidation/Reduction</td>
<td>Does not react with water, ammonium phosphate, iron powder or ferric chloride.</td>
</tr>
</tbody>
</table>

9.2. Other Information: No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Product is stable.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures.


SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

<table>
<thead>
<tr>
<th>Compound</th>
<th>Route of Exposure</th>
<th>Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metolachlor (51218-45-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>2926 mg/kg male</td>
<td></td>
</tr>
<tr>
<td>LD50 Dermal Rat</td>
<td>&gt; 5050 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>
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Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>LC50 Inhalation Rat</th>
<th>&gt; 2.18 mg/l (Exposure time: 4 h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Oral)</td>
<td>2,133.00 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Not classified

pH: 4.94

Serious Eye Damage/Irritation: Not classified

pH: 4.94

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure to liquid may cause a mild irritation. Symptoms may be delayed.

Symptoms/Injuries After Skin Contact: May cause an allergic reaction in sensitive individuals. May cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: May be harmful if swallowed.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Metolachlor (51218-45-2)

<table>
<thead>
<tr>
<th>LC50 Fish 1</th>
<th>8.6 - 12 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia 1</td>
<td>25.1 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC 50 Fish 2</td>
<td>3.3 - 4.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>4.25 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability

Stalwart Herbicide

Persistence and Degradability: Not established.

12.3. Bioaccumulative Potential

Stalwart Herbicide

Bioaccumulative Potential: Not established.

Metolachlor (51218-45-2)

<table>
<thead>
<tr>
<th>BCF fish 1</th>
<th>69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>2.9 (at 25 °C)</td>
</tr>
</tbody>
</table>

12.4. Mobility in Soil: No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT: Not regulated for transport

14.2. In Accordance with IMDG: Not regulated for transport

14.3. In Accordance with IATA: Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

All components in the mixture are listed on the United States TSCA (Toxic Substances Control Act) inventory.

Stalwart Herbicide

EPA FIFRA Pesticide Product Notice: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non pesticide
### Stalwart Herbicide

**Safety Data Sheet**

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<table>
<thead>
<tr>
<th><strong>EPA FIFRA Signal Word</strong></th>
<th>Caution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPA FIFRA Hazard Statements</strong></td>
<td>Harmful by inhalation, in contact with skin and if swallowed. Moderate eye irritant.</td>
</tr>
</tbody>
</table>

### 15.2 US State Regulations

**Metolachlor (51218-45-2)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Georgia - Drinking Water - Unregulated Organic Contaminants</td>
<td></td>
</tr>
<tr>
<td>U.S. - Illinois - Toxic Air Contaminants</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Drinking Water Guidelines</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Groundwater Protection List (333 CMR12.00)</td>
<td></td>
</tr>
<tr>
<td>U.S. - Minnesota - Chemicals of High Concern</td>
<td></td>
</tr>
<tr>
<td>U.S. - Minnesota - Groundwater Health Risk Limits</td>
<td></td>
</tr>
<tr>
<td>RTK - U.S. - New Jersey - Right to Know Hazardous Substance List</td>
<td></td>
</tr>
<tr>
<td>U.S. - New Jersey - Special Health Hazards Substances List</td>
<td></td>
</tr>
<tr>
<td>U.S. - Texas - Effects Screening Levels - Long Term</td>
<td></td>
</tr>
<tr>
<td>U.S. - Texas - Effects Screening Levels - Short Term</td>
<td></td>
</tr>
</tbody>
</table>

**Metolachlor (51218-45-2)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>05/26/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Information</td>
<td>This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.</td>
</tr>
</tbody>
</table>

**GHS Full Text Phrases:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment - Acute Hazard Category 1</td>
</tr>
<tr>
<td>Aquatic Acute 2</td>
<td>Hazardous to the aquatic environment - Acute Hazard Category 2</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)