Bonide Sulfur Plant Fungicide
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name : Bonide Sulfur Plant Fungicide
Product code : 462

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : Fungicide

1.3. Details of the supplier of the safety data sheet
Bonide Products, Inc.
6301 Sutliff Road
Oriskany, NY 13424
T (315) 736-8231
www.bonide.com

1.4. Emergency telephone number
Emergency number : CHEMTREC - 1 (800) 424-9300 and/or 1 (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Skin Irrit. 2  H315

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US) : GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H315 - Causes skin irritation
Precautionary statements (GHS-US) : P264 - Wash hands thoroughly after handling
P280 - Wear gloves/eye protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS-US)
No data available

SECTION 3: Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur</td>
<td>(CAS No) 7704-34-9</td>
<td>90</td>
<td>Skin Irrit. 2, H315</td>
</tr>
</tbody>
</table>

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 : Assure fresh air breathing. Allow the person to rest.
First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. Gently wash with plenty of soap and water. Get medical advice/attention.
First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion: Give one tablespoon of Syrup of Ipecac to induce vomiting. If vomiting does occur, give fluids again. If vomiting has not occurred in twenty minutes, the same dose of Syrup of Ipecac may be repeated one additional time. Alternatively, vomiting may be induced by touching the back of the throat with a finger. Immediately consult a doctor/medical service.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact: Causes skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Fire will rekindle until mass is cooled below 310 degrees F.

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: combustion products of Sulfur oxide gases.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

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

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures: Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Protect from moisture. Keep container closed when not in use. Keep in fireproof place. Store in original container.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Sulfur (7704-34-9)</th>
<th>USA ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3 mg/m³</td>
</tr>
</tbody>
</table>

Revision date: 02/18/2016  EN (English US)
### 8.2. Exposure controls

<table>
<thead>
<tr>
<th>Category</th>
<th>Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal protective equipment</td>
<td>Avoid all unnecessary exposure.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Wear protective gloves.</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Chemical goggles or safety glasses.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Wear suitable protective clothing.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Wear approved mask.</td>
</tr>
<tr>
<td>Other information</td>
<td>When using, do not eat, drink or smoke.</td>
</tr>
</tbody>
</table>

### 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>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Yellow pale powder.</td>
</tr>
<tr>
<td>Color</td>
<td>Pale yellow.</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint odor of rotten eggs.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>118 - 120 °C</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>405 °F closed cup</td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td>464 °F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Flammable</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>Density</td>
<td>75-115 lbs./cu. ft</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

- Open flame. Extremely high or low temperatures. Sparks.

#### 10.5. Incompatible materials

- Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

- Carbon monoxide. Carbon dioxide.
**Bonide Sulfur Plant Fungicide**  
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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity**: Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rabbit</th>
<th>LC50 inhalation rat (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur (7704-34-9)</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>&gt; 9.23 mg/l/4h (Rat)</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: Causes skin irritation.

**Serious eye damage/irritation**: Not classified

**Respiratory or skin sensitization**: Not classified

**Germ cell mutagenicity**: 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

**Potential Adverse human health effects and symptoms**: Based on available data, the classification criteria are not met.

**Symptoms/injuries after skin contact**: Causes skin irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 1</th>
<th>LC50 fish 2</th>
<th>TLM fish 1</th>
<th>Threshold limit other aquatic organisms 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur (7704-34-9)</td>
<td>866 mg/l (96 h; Brachydanio rerio)</td>
<td>&gt; 100 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)</td>
<td>10000 ppm (96 h; Gambusia affinis)</td>
<td>&gt; 10000 mg/l (24 h; Daphnia magna)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**Bonide Sulfur Plant Fungicide**

**Persistence and degradability**: Not established.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur (7704-34-9)</td>
<td>Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.</td>
</tr>
<tr>
<td></td>
<td>Biochemical oxygen demand (BOD) Not applicable</td>
</tr>
<tr>
<td></td>
<td>Chemical oxygen demand (COD) Not applicable</td>
</tr>
<tr>
<td></td>
<td>ThOD Not applicable</td>
</tr>
<tr>
<td></td>
<td>BOD (% of ThOD) Not applicable</td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

**Bonide Sulfur Plant Fungicide**

**Bioaccumulative potential**: Not established.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur (7704-34-9)</td>
<td>0.23 (Estimated value)</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil

**Bonide Sulfur Plant Fungicide**

**Ecology - soil**: Not toxic to bees.

#### 12.5. Other adverse effects

**Other information**: Avoid release to the environment.

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Revision date: 02/18/2016  
EN (English US)
**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

| Waste disposal recommendations | Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials       | Avoid release to the environment. |

**SECTION 14: Transport information**

In accordance with DOT

**Additional information**

| Other information | No supplementary information available. |

**SECTION 15: Regulatory information**

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**CAUTION:** Harmful if swallowed, inhaled, or absorbed through skin. May cause irritation of eyes, nose, throat and skin. Avoid contact with eyes or skin. Avoid breathing dust vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

15.1. US Federal regulations

No additional information available

15.2. International regulations

No additional information available

15.3. US State regulations

**Sulfur (7704-34-9)**

U.S. - New Jersey - Right to Know Hazardous Substance List

**SECTION 16: Other information**

| Other information | None. |

Full text of H-phrases: see section 16:

| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| H315          | Causes skin irritation |

**SDS US (GHS HazCom 2012) - Pesticides**

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.