



# Bonide Citrus, Fruit & Nut Orchard Spray Concentrate

## 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 Citrus, Fruit & Nut Orchard Spray Concentrate  
Product code : 67702174

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Insecticide, 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](http://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)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

#### 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

Name	Product identifier	%	Classification (GHS-US)
Sulfur, solid	(CAS No) 7704-34-9	10	Not classified
Pyrethrins	(CAS No) 8003-34-7	0.25	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Inhalation:vapour), H331

### 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 : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.  
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 : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

No additional information available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 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

##### 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 : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. 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 : Protect from moisture. Keep container tightly closed. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container closed when not in use.  
Incompatible products : Strong bases. strong acids.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Bonide Citrus, Fruit & Nut Orchard Spray Concentrate		
DNEL	DNEL	>=
Pyrethrins (8003-34-7)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Sulfur, solid (7704-34-9)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>

#### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.  
Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Yellow, opaque suspension.
Color	: Light yellow.
Odor	: Sulfur and slight alcohol smell.
Odor threshold	: No data available
pH	: 4.1 - 4.4
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 325 °F
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.04
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

#### 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

Extremely high or low temperatures.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Pyrethrins (8003-34-7)	
LD50 oral rat	200 mg/kg (Rat)
LC50 inhalation rat (mg/l)	3.4 mg/l/4h (Rat)

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<b>Sulfur, solid (7704-34-9)</b>	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h (Rat)

Skin corrosion/irritation	: Not classified pH: 4.1 - 4.4
Serious eye damage/irritation	: Not classified pH: 4.1 - 4.4
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
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Pyrethrins (8003-34-7)</b>	
LC50 fish 1	0.049 mg/l (96 h; <i>Lepomis macrochirus</i> )
LC50 other aquatic organisms 1	0.011 mg/l (96 h; <i>Gammarus</i> sp.)
LC50 fish 2	0.009 mg/l (96 h; <i>Ictalurus punctatus</i> )
Threshold limit other aquatic organisms 1	0.011 mg/l (96 h; <i>Gammarus</i> sp.)

<b>Sulfur, solid (7704-34-9)</b>	
LC50 fish 1	866 mg/l (96 h; <i>Brachydanio rerio</i> )
LC50 fish 2	> 100 mg/l 96 h; <i>Salmo gairdneri</i> ( <i>Oncorhynchus mykiss</i> )
TLM fish 1	10000 ppm (96 h; <i>Gambusia affinis</i> )
Threshold limit other aquatic organisms 1	> 10000 mg/l (24 h; <i>Daphnia magna</i> )

### 12.2. Persistence and degradability

<b>Bonide Citrus, Fruit &amp; Nut Orchard Spray Concentrate</b>	
Persistence and degradability	Not established.

<b>Pyrethrins (8003-34-7)</b>	
Persistence and degradability	Readily biodegradable in water.

<b>Sulfur, solid (7704-34-9)</b>	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

<b>Bonide Citrus, Fruit &amp; Nut Orchard Spray Concentrate</b>	
Bioaccumulative potential	Not established.

<b>Pyrethrins (8003-34-7)</b>	
Log Pow	6.15 (Estimated value)

<b>Sulfur, solid (7704-34-9)</b>	
Log Pow	0.23 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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### 12.4. Mobility in soil

#### Pyrethrins (8003-34-7)

Ecology - soil : Not toxic to plants. Toxic to bees.

#### Sulfur, solid (7704-34-9)

Ecology - soil : Not toxic to bees.

### 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 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

No dangerous good in sense of transport regulations

### 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:

Causes moderate eye irritation.

### 15.1. US Federal regulations

No additional information available

### 15.2. International regulations

No additional information available

### 15.3. US State regulations

#### pyrethrins (8003-34-7)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### sulfur, solid (7704-34-9)

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

## SECTION 16: Other information

Other information : None.

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.*