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

<table>
<thead>
<tr>
<th>1.1. Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
</tr>
<tr>
<td><strong>Product code</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.2. Relevant identified uses of the substance or mixture and uses advised against</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of the substance/mixture</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.3. Details of the supplier of the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonide Products, Inc.</td>
</tr>
<tr>
<td>6301 Sutliff Road</td>
</tr>
<tr>
<td>Oriskany, NY 13424</td>
</tr>
<tr>
<td>T (315) 736-8231</td>
</tr>
<tr>
<td><a href="http://www.bonide.com">www.bonide.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.4. Emergency telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency number</strong></td>
</tr>
</tbody>
</table>

### SECTION 2: Hazards identification

<table>
<thead>
<tr>
<th>2.1. Classification of the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Classification (GHS-US)</strong></td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
</tr>
<tr>
<td>Skin Irritation 2</td>
</tr>
<tr>
<td>Eye Irritation 2B</td>
</tr>
<tr>
<td>Aquatic Toxicity Acute 1</td>
</tr>
<tr>
<td>Aquatic Toxicity Chronic 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.2. Label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GHS-US labeling</strong></td>
</tr>
<tr>
<td>Hazard pictograms (GHS-US)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Signal word (GHS-US)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Warning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Hazard statements (GHS-US)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>Causes eye irritation</td>
</tr>
<tr>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Highly flammable liquid and vapor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Precautionary statements (GHS-US)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep away from heat/open flames/sparks... - No smoking</td>
</tr>
<tr>
<td>Keep container tightly closed</td>
</tr>
<tr>
<td>Ground/bond container and receiving equipment</td>
</tr>
<tr>
<td>Use only non-sparking tools</td>
</tr>
<tr>
<td>Take precautionary measures against static discharge</td>
</tr>
<tr>
<td>Wear gloves</td>
</tr>
<tr>
<td>IF ON SKIN: Wash with plenty of soap and water</td>
</tr>
<tr>
<td>IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower</td>
</tr>
<tr>
<td>If skin irritation or rash occurs: Get medical advice/attention</td>
</tr>
<tr>
<td>Take off contaminated clothing and wash it before reuse</td>
</tr>
<tr>
<td>Store in a well-ventilated place. Keep cool</td>
</tr>
<tr>
<td>Dispose of contents/container to in accordance with local/regional/national regulations</td>
</tr>
</tbody>
</table>

### SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixture</th>
</tr>
</thead>
</table>
Bonide Malathion Insect Control
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 if 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.

Symptoms/injuries after skin contact: May cause moderate irritation.

Symptoms/injuries after eye contact: Causes eye irritation.

Symptoms/injuries after ingestion: Single dose oral toxicity is moderate; however, ingestion of larger amounts may cause serious injury.

Chronic symptoms: Repeated exposure to cholinesterase inhibitors may, without warning, cause increased susceptibility to doses of any other cholinesterase inhibitor. Kidney and liver damage is possible from exposure to xylenes over long periods.

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

Note to physician: Malathion is a cholinesterase inhibitor. ANTIDOTE: Administer atropine sulphate in large doses. Two to Four mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinisation appear. 2-Pam chloride is a pharmacological antidote and may be administered as an adjunct to, but not a substitute for atropine. Do not give morphine or tranquilizers. At first sign of pulmonary edema, patient should be given supplemental oxygen and treated symptomatically. Continued absorption of Malathion may occur after initial improvement. Very close supervision of patient is indicated for at least 48 hours.

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: Highly flammable liquid and vapor.

Explosion hazard: May form flammable/explosive vapor-air mixture.

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: Remove ignition sources. Use special care to avoid static electric charges.

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
Additional hazards when processed: Keep away from ignition sources. Handle empty containers with care because residual vapors are flammable.

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. No naked lights. No smoking. Use only non-sparking tools.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.

Storage conditions: Keep only in the original container in a cool, well ventilated place away from children. Keep in fireproof place. Keep container tightly closed.

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

| Malathion (ISO), 1,2-bis(ethoxy carbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5) |
|---------------------------------|-------------------------|
| USA ACGIH | ACGIH TWA (mg/m³) | 1 mg/m³ |

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.

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>Free-flowing liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Light straw colored</td>
</tr>
<tr>
<td>Odor</td>
<td>Strong aromatic odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>2.9</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 300°F Min.</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>112 °F</td>
</tr>
<tr>
<td>Self 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>No data available</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>
</tbody>
</table>
Bonide Malathion Insect Control
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density : 1.06
Solubility : Emulsifies. Active ingredient essentially insoluble.
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. Not established. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Extremely high or low temperatures. Open flame. Sunlight.

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified

**Naphtha, heavy aromatic (64742-94-5)**

| LD50 oral rat | > 5000 mg/kg (Rat) |
| LD50 dermal rabbit | > 2000 mg/kg (Rabbit) |
| LC50 inhalation rat (mg/l) | > 5 mg/l/4h (Rat) |

**Solvent naphtha (petroleum), light aromatic (64742-95-6)**

| LD50 oral rat | 8400 mg/kg |

**Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)**

| LD50 oral rat | 5500 mg/kg |
| LD50 dermal rat | ≥ 2000 mg/kg |
| LD50 dermal rabbit | 4100 mg/kg (Rabbit) |
| ATE (oral) | 500.000 mg/kg body weight |

Skin corrosion/irritation : Not classified
pH: 2.9

Serious eye damage/irritation : Not classified
pH: 2.9

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

**Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)**

| IARC group | 3 - Not Classifiable |

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 : May cause moderate irritation.

Symptoms/injuries after eye contact : Causes eye irritation.

Symptoms/injuries after ingestion : Single dose oral toxicity is moderate; however, ingestion of larger amounts may cause serious injury.

Chronic symptoms : Repeated exposure to cholinesterase inhibitors may, without warning, cause increased susceptibility to doses of any other cholinesterase inhibitor. Kidney and liver damage is possible from exposure to xylenes over long periods.

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Naphtha, heavy aromatic (64742-94-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>2.1 - 4.2 mg/l (96 h; Lepomis macrochirus; Fresh water)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>0.95 mg/l (48 h; Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>2.34 mg/l (96 h; Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>1 mg/l (72 h; Skeletonema costatum; Growth)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>0.10 mg/l (96 h; Lepomis macrochirus)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>0.0008 mg/l (48 h; Daphnia pulex)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>0.17 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>0.00036 mg/l (384 h; Daphnia magna)</td>
</tr>
<tr>
<td>TLM fish 1</td>
<td>0.24 mg/l (96 h; Phoxinus phoxinus; Pure water)</td>
</tr>
<tr>
<td>TLM fish 2</td>
<td>0.09 ppm (96 h; Lepomis macrochirus)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Bonide Malathion Insect Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Naphtha, heavy aromatic (64742-94-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solvent naphtha (petroleum), light aromatic (64742-95-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradable in the soil.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Bonide Malathion Insect Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Naphtha, heavy aromatic (64742-94-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>2.9 - 6.1</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Bioaccumulative.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solvent naphtha (petroleum), light aromatic (64742-95-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>2.1 - 6</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>2.36 - 2.89</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>
12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
</tr>
<tr>
<td>0.037 N/m (24 °C)</td>
</tr>
<tr>
<td>Ecology - soil</td>
</tr>
<tr>
<td>Toxic to bees. Not toxic to plants.</td>
</tr>
</tbody>
</table>

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. Dispose of contents/container to in accordance with local/regional/national regulations.

Additional information : Handle empty containers with care because residual vapors are flammable.

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:
Harmful if swallowed or absorbed through skin.
Causes moderate eye irritation.

15.1. US Federal regulations

No additional information available

SECTION 16: Other information

Other information : None.

Acute toxicity (oral) Category 4
Aspiration hazard Category 1
Carcinogenicity Category 1B
Flammable liquids Category 2
Germ cell mutagenicity Category 1B
Skin corrosion/irritation Category 2
Skin sensitization Category 1
Highly flammable liquid and vapor
Harmful if swallowed
Causes skin irritation
May cause an allergic skin reaction
Very toxic to aquatic life with long lasting effects
Causes eye 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.