



Bonide A Complete Fruit Tree Spray

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 A Complete Fruit Tree Spray
Product code : 4122

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

Use of the substance/mixture : Fungicide, Insecticide

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)

Flam. Liq. 2 H225
Skin Sens. 1 H317

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapor
H317 - May cause an allergic skin reaction

Precautionary statements (GHS-US) : P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust, spray, vapors, mist, fume
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective clothing, protective gloves, face protection, eye protection
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P321 - Specific treatment (see section 4 on this label)
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use water for extinction
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to in accordance with local/regional/national regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

Mixture

Name	Product identifier	%	Classification (GHS-US)
Captan (Component)	(CAS No) 133-06-2	11.76	Acute Tox. 4 (Inhalation:dust,mist), H332
Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion]	(CAS No) 121-75-5	6.0	Skin Sens. 1, H317
Naphtha,heavy aromatic	(CAS No) 64742-94-5	0.73	Skin Irrit. 2, H315 Asp. Tox. 1, H304
Carbaryl	(CAS No) 63-25-2	0.30	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312

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. Wash with plenty of soap and water. If skin irritation or rash occurs seek medical attention. Get medical advice/attention. Wash contaminated clothing before reuse.
- 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 after inhalation : May cause an allergic skin reaction.

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

No additional information available

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

- 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.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : 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 open flames. No smoking. Use only non-sparking tools. Avoid breathing spray/mist/vapors.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

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.
- Incompatible materials : Sources of ignition. Heat sources.

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(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³

Captan (133-06-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³

Carbaryl (63-25-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³

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

- Physical state : Liquid
- Color : Milky
- Odor : Aromatic
- Odor threshold : No data available
- pH : 5 - 6
- 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 : 107 °F
- Self ignition temperature : 204 °C
- 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 : 0.97
- Solubility : Soluble in water.

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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

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

Sparks. Extremely high or low temperatures. Open flame.

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

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

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)

Captan (133-06-2)	
LD50 oral rat	9000 mg/kg (Rat)
LD50 dermal rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 9000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	1.12 mg/l/4h
ATE (gases)	700.000 ppmV/4h
ATE (vapors)	3.000 mg/l/4h
ATE (dust, mist)	0.500 mg/l/4h

Carbaryl (63-25-2)	
LD50 oral rat	230 mg/kg (Rat)
LD50 dermal rat	4000 mg/kg (Rat)
LD50 dermal rabbit	2000 mg/kg (Rabbit)
ATE (oral)	500.000 mg/kg body weight
ATE (gases)	4500.000 ppmV/4h
ATE (vapors)	11.000 mg/l/4h
ATE (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 5 - 6

Serious eye damage/irritation : Not classified
pH: 5 - 6

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

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Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)	
IARC group	3 - Not Classifiable
Captan (133-06-2)	
IARC group	3 - Not Classifiable
Carbaryl (63-25-2)	
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 inhalation	: May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)	
LC50 fish 1	0.10 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 1	0.0008 mg/l (48 h; Daphnia pulex)
LC50 fish 2	0.17 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	0.00036 mg/l (384 h; Daphnia magna)
TLM fish 1	0.24 mg/l (96 h; Phoxinus phoxinus; Pure water)
TLM fish 2	0.09 ppm (96 h; Lepomis macrochirus)
Naphtha,heavy aromatic (64742-94-5)	
LC50 fish 1	2.1 - 4.2 mg/l (96 h; Lepomis macrochirus; Fresh water)
EC50 Daphnia 1	0.95 mg/l (48 h; Daphnia magna)
LC50 fish 2	2.34 mg/l (96 h; Oncorhynchus mykiss)
Threshold limit algae 1	1 mg/l (72 h; Skeletonema costatum; Growth)
Captan (133-06-2)	
LC50 fish 1	0.0732 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
LC50 fish 2	0.141 mg/l (96 h; Lepomis macrochirus)
TLM fish 1	0.030 mg/l (24 h; Brachydanio rerio)
TLM fish 2	0.3 mg/l (48 h; Pisces)
Carbaryl (63-25-2)	
LC50 fish 1	2 - 10.36 mg/l (96 h; Cyprinus carpio)
EC50 Daphnia 1	0.0064 mg/l (48 h; Daphnia pulex; Larvae)
EC50 other aquatic organisms 1	0.0076 mg/l (48 h; Simocephalus serrulatis)
LC50 fish 2	0.86 - 4.3 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	2.3 ppm (96 h; Mytilus edulis)
TLM fish 1	2.5 ppm (96 h; Oncorhynchus kisutch; Young)
TLM fish 2	5.5 ppm (96 h; Lepomis macrochirus)
Threshold limit algae 1	0.03 mg/l (Microcystis aeruginosa)
Threshold limit algae 2	1.4 mg/l (Scenedesmus quadricauda)

12.2. Persistence and degradability

Bonide A Complete Fruit Tree Spray	
Persistence and degradability	Not established.
Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)	
Persistence and degradability	Biodegradable in the soil.

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Naphtha,heavy aromatic (64742-94-5)	
Persistence and degradability	Not readily biodegradable in water.
Captan (133-06-2)	
Persistence and degradability	Readily biodegradable in water. Hydrolysis in water. Not established.
Carbaryl (63-25-2)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance

12.3. Bioaccumulative potential

Bonide A Complete Fruit Tree Spray	
Bioaccumulative potential	Not established.
Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)	
Log Pow	2.36 - 2.89
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Naphtha,heavy aromatic (64742-94-5)	
Log Pow	2.9 - 6.1
Bioaccumulative potential	Bioaccumable.
Captan (133-06-2)	
Log Pow	2.35 - 2.54
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
Carbaryl (63-25-2)	
BCF fish 1	140 (Ictalurus punctatus)
BCF other aquatic organisms 1	4000 (Algae)
BCF other aquatic organisms 2	260 (Crustacea)
Log Pow	2.32 - 2.36
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)	
Surface tension	0.037 N/m (24 °C)
Ecology - soil	Toxic to bees. Not toxic to plants.
Captan (133-06-2)	
Ecology - soil	Not toxic to plants. Not toxic to bees in normal conditions of use.
Carbaryl (63-25-2)	
Ecology - soil	Not toxic to plants. 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.
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.

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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:

WARNING: KEEP OUT OF REACH OF CHILDREN

Causes substantial but temporary eye injury.

Causes skin irritation.

Harmful if swallowed.

Harmful if inhaled.

15.1. US Federal regulations

No additional information available

15.2. International regulations

No additional information available

15.3. US State regulations

Captan (133-06-2)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes				

Captan (133-06-2)

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

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H332	Harmful if inhaled

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.