



# 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](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)

Flam. Liq. 3 H226  
Aspiration 1 H304  
Skin Irrit. 2 H315  
Skin Sens. 1 H317  
Eye Irrit. 2 H319  
STOT SE 3 H335  
Carcinogen 2 H351

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor.  
H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.  
H351 - Suspected of causing cancer.

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.  
P233 - Keep container tightly closed.  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing mist, vapors, or spray.  
P264 - Wash exposed skin thoroughly after handling.  
P271 - Use only outdoors or in well-ventilated area.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective clothing, protective gloves, and eye protection.  
P308 + P313 If exposed or concerned: Get medical advice.

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P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P331 – Do NOT induce vomiting.  
P303+P361+P353 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.  
P333+P313 - If skin irritation or rash occurs: Get medical advice.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 Call a POISON CENTER or doctor if you feel unwell.  
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 – If eye irritation persists: Get medical advice.  
P370+P378 - In case of fire: Use foam, dry powder, Carbon dioxide foam, or sand. for extinction  
P403+P233+P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
P405 – Store locked up.  
P501 - Dispose of contents/container to in accordance with local and national regulations.

### 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)
Naphtha,heavy aromatic	(CAS No) 64742-94-5	74	Skin Irrit. 2, H315 Asp. Tox. 1, H304
Trimethylbenzene	(CAS No.) 25551-13-7	3	Flam. Liq. 3, H226 Acute Tox 4 (Oral), H302 Acute Tox 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319
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
Cumene	(CAS No.) 98-82-8	2	Flam. Liq. 3, H226 Asp. 1, H304 STOT SE 3, H335 Carc. 2, H351
Xylenes	(CAS No.) 1330-20-7	1.54	Flam. Liq. 3, H226 Asp. 1, H304 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation: vapors), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Carbaryl	(CAS No) 63-25-2	0.30	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Carc. 2, H351

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Assure fresh air breathing. Allow the person to rest. If breathing difficulty or symptoms occur, get medical attention.
- First-aid measures after skin contact : Wash with plenty of soap and water. If skin irritation or rash occurs seek medical attention. Get medical advice. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse with plenty of water for several minutes. Remove contact lenses if present and easy to do; continue rinsing. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Do NOT induce vomiting. Obtain immediate medical attention.

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

Symptoms/injuries after inhalation : Causes skin and eye irritation. Causes respiratory tract irritation. May cause an allergic skin reaction. Aspiration hazard – may be fatal if ingested and enters airways. Suspected of causing cancer.

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

Get immediate medical attention for ingestion.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam, dry powder, Carbon dioxide foam, or 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. Vapors may be heavier than air and travel to a remote ignition source and flash back.  
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. Ventilate spill area thoroughly with ignition proof equipment.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

### 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 : 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 mist, vapors, or spray.  
Hygiene measures : Contaminated work clothing must 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.  
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

**Naptha, heavy aromatic**

None Established

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Trimethylbenzene		
USA ACGIH	ACGIH TWA (ppm)	25 ppm

  

Captan (133-06-2)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (Inhalable)

  

Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (IFV)
USA OSHA	OSHA PEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (Total dust)

  

Cumene		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	50 ppm
USA OSHA	OSHA PEL (ppm)	50 ppm (skin)

  

Xylenes		
USA ACGIH	ACGIH TWA (ppm)	100 ppm (BEI)
USA ACGIH	ACGIH STEL (ppm)	150 ppm
USA OSHA	OSHA PEL (ppm)	100 ppm

  

Carbaryl (63-25-2)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup> (IFV, BEI (Skin))
USA OSHA	OSHA PEL (mg/m <sup>3</sup> )	5 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 with side-shields.
Respiratory protection	: Wear approved respiratory protection to ensure that exposure is below the 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

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	: 41.6°C (107 °F)
Self ignition temperature	: 204 °C (399 °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.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not normally reactive.

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### 10.2. Chemical stability

Product is stable under normal use and storage conditions.

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

Heat, sparks, open flame. 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 :

<b>Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)</b>	
LD50 oral rat	5500 mg/kg
LD50 dermal rabbit	4100 mg/kg (Rabbit)

<b>Naphtha,heavy aromatic (64742-94-5)</b>	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5 mg/l/4h (Rat)

<b>Captan (133-06-2)</b>	
LD50 oral rat	9000 mg/kg (Rat)
LD50 dermal rabbit	> 9000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	1.12 mg/l/4h

<b>Carbaryl (63-25-2)</b>	
LD50 oral rat	230 mg/kg (Rat)
LD50 dermal rabbit	2000 mg/kg (Rabbit)

Skin corrosion/irritation : Causes skin irritation.  
pH: 5 - 6

Serious eye damage/irritation : Causes serious eye irritation.  
pH: 5 - 6

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

Germ cell mutagenicity : Not classified

Carcinogenicity :

<b>Cumene</b>	
IARC group	2B – Possibly Carcinogenic to Humans

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Causes respiratory irritation. Causes drowsiness and dizziness.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : May be fatal if swallowed and enters airways.

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

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

<b>Naphtha,heavy aromatic (64742-94-5)</b>	
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)

<b>Captan (133-06-2)</b>	
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)

<b>Carbaryl (63-25-2)</b>	
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

<b>Bonide A Complete Fruit Tree Spray</b>	
Persistence and degradability	Not established.

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

<b>Naphtha,heavy aromatic (64742-94-5)</b>	
Persistence and degradability	Not readily biodegradable in water.

<b>Captan (133-06-2)</b>	
Persistence and degradability	Readily biodegradable in water. Hydrolysis in water. Not established.

<b>Carbaryl (63-25-2)</b>	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>Bonide A Complete Fruit Tree Spray</b>	
Bioaccumulative potential	Not established.

<b>Malathion (ISO), 1,2-bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate, [containing ≤ 0.03 % isomalathion] (121-75-5)</b>	
Log Pow	2.36 - 2.89
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

<b>Naphtha,heavy aromatic (64742-94-5)</b>	
Log Pow	2.9 - 6.1
Bioaccumulative potential	Bioaccumable.

<b>Captan (133-06-2)</b>	
Log Pow	2.35 - 2.54

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<b>Captan (133-06-2)</b>	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
<b>Carbaryl (63-25-2)</b>	
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

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

<b>Captan (133-06-2)</b>	
Ecology - soil	Not toxic to plants. Not toxic to bees in normal conditions of use.

<b>Carbaryl (63-25-2)</b>	
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

DOT: UN/ID Number: UN1993  
Proper Shipping Name: Flammable Liquid  
Hazard Class: 3  
Packing Group: III  
Consumer Commodity

## 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

<b>Cumene (98-82-8)</b>				
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				

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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 (Oral)	Acute toxicity (oral) Category 4
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapors)	Acute toxicity (inhalation:vapors) Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
Eye Irrit. 2	Eye corrosion/irritation Category 2
Carc. 2	Carcinogen Category 2
STOT SE 3	Specific Target Organ Toxicity – Single Exposure Category 3
H226	Flammable liquid and vapor
H301	Toxic if swallowed.
H302	Harmful 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.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	Causes respiratory tract irritation.
H351	Suspected of causing cancer.

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.*