



## Bayer Advanced Garden Disease Control for Roses, Flowers & Shrubs Concentrate

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

<b>Product Name</b>	Bayer Advanced Garden Disease Control for Roses, Flowers & Shrubs Concentrate
<b>Chemical Name</b>	
<b>Common Name</b>	
<b>MSDS Number</b>	1980
<b>Chemical Family</b>	
<b>Chemical Formulation</b>	
<b>EPA Registration No.</b>	72155-14

Bayer Environmental Science  
95 Chestnut Ridge Road  
Montvale, NJ 07645  
USA

For MEDICAL, TRANSPORTATION or Other EMERGENCY call 1-800-334-7577 24 hours/day  
For Product Information call 1-800-331-2867

**Product Use Description** Bayer Advanced Garden Disease Control for Roses, Flowers & Shrubs cures, stops and prevents plant diseases. This systemic formula provides rainproof protection against most common plant diseases such as black spot, powdery mildew, rust and more.

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Tebucanazole	107534-96-3	2.7000	3.1000
1,2-Propylene glycol	57-55-6	9.5000	10.5000

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MSDS Version 1.1

### SECTION 3. HAZARDS IDENTIFICATION

*NOTE: Please refer to Section 11 for detailed toxicological information.*

<b><u>Emergency Overview</u></b>	Caution! Hazards to humans and domestic animals. Harmful if swallowed, inhaled or absorbed through the skin. Wash thoroughly with soap and water after handling. Avoid contact with skin, eyes and clothing. Remove contaminated clothing. Avoid breathing vapors and spray mist.
<b>Physical State</b>	Low viscosity liquid
<b>Routes of Exposure</b>	Ingestion Skin contact. Inhalation.
<b>Immediate Effects</b>	
<b>General</b>	Do not allow children and pets to enter the treated area until it has dried.
<b>Eye</b>	Avoid contact with eyes or clothing.
<b>Skin</b>	Harmful if absorbed through the skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled. Avoid breathing vapors and mists.

### SECTION 4. FIRST AID MEASURES

<b>Skin</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
<b>Ingestion</b>	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>Inhalation</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	> 93.3 °C / > 199.9 °F Method: Setaflash Closed Cup
<b>Suitable Extinguishing Media</b>	Dry chemical, Foam
<b>Fire Fighting</b>	Keep out of smoke. Contain runoff.

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### Instructions

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

- General and Disposal** Use proper protective equipment to minimize personal exposure (see Section 8). Absorb with vermiculite or other inert absorbent. Collect and contain contaminated absorbent and dike material for disposal.
- Land Spill or Leaks** Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

#### SECTION 7. HANDLING AND STORAGE

- Handling Procedures** Read label carefully before use. Use the recommended equipment when handling this product (see Section 8).
- Storing Procedures** Store in original container and out of the reach of children, preferably in a locked storage area. Store in a cool, dry area. Protect product from freezing temperatures.
- Work/Hygienic Procedures** Avoid contact with skin, eyes and clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Eye/Face Protection** Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles.
- Hand Protection** Wear rubber gloves.
- Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.
- Respiratory Protection** Ensure adequate ventilation.
- General Protection** Follow all label instructions.

#### Exposure Limits

1,2-Propylene glycol	57-55-6	WEEL	TWA	Total vapor and aerosol.	50 ppm
		Form of Exposure			
		WEEL	TWA	Aerosol.	10 mg/m3
		Form of Exposure			
ACGIH	TWA	Respirable.	3 mg/m3		
Form of Exposure					

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US CA OEL	TWA PEL	5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL	TWA PEL	10 mg/m3
Form of Exposure	Total dust.	
US CA OEL	TWA PEL	5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL	TWA PEL	5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL	TWA PEL	10 mg/m3
Form of Exposure	Total dust.	
US CA OEL	TWA PEL	10 mg/m3
Form of Exposure	Total dust.	
ACGIH	TWA	10 mg/m3
Form of Exposure	Inhalable particulate.	

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Low viscosity liquid
<b>pH</b>	5.0 - 8.0
<b>Density</b>	0.989 g/ml at 20 °C
<b>Viscosity</b>	400 - 1,000 mPa.s 25 °C

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Do not freeze.
<b>Hazardous Polymerization (Conditions to avoid)</b>	Will not occur.

### SECTION 11. TOXICOLOGICAL INFORMATION

<b>Acute Oral Toxicity</b>	Male and Female Rat: LD50: > 2,000 mg/kg
<b>Acute Dermal Toxicity</b>	Male and Female Rat: LD50: > 4,000 mg/kg
<b>Acute Inhalation Toxicity</b>	Male and Female Rat: LC50: 4-hr exposure to liquid aerosol: > 1.975 mg/l
<b>Skin Irritation</b>	Male and Female Rat: 1-hr exposure to liquid aerosol (extrapolated from 4-hr LC50): > 7.9 mg/l Rabbit: Slight dermal irritant.

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**Eye Irritation** Rabbit: Non-irritating.

**Sensitization** Guinea pig: Not a dermal sensitizer.

**Sub-Chronic Toxicity** In a 3 week dermal toxicity study, rabbits treated with tebuconazole showed no local or systemic effects at levels up to and including 1000 mg/kg, the limit dose. In a 3 week inhalation study, rats exposed to tebuconazole exhibited liver enzyme effects at the highest concentration tested (155.8 mg/m<sup>3</sup>).

**Chronic Toxicity** In chronic dietary studies in rats and dogs treated with tebuconazole, effects on the liver, spleen, adrenals and/or eyes occurred at high doses.

### Assessment Carcinogenicity

Tebuconazole gave no evidence of a carcinogenic potential in an oncogenicity study in rats, however, in a study using mice there was an increased incidence of hepatocellular neoplasms at a dose level approximately three-fold greater than the maximum tolerated dose (MTD).

#### ACGIH

None

#### NTP

None

#### IARC

None

#### OSHA

None

**Reproductive & Developmental Toxicity** In a two generation study in rats treated with tebuconazole, smaller litters and decreased pup body weights were observed in conjunction with maternal toxicity at the highest concentration tested (1000 ppm).

Tebuconazole produced teratogenic effects in conjunction with maternal toxicity in mice and rabbits via oral and/or dermal exposure. When tested in the rat, developmental effects were observed in conjunction with maternal toxicity via oral exposure. Teratogenic effects were not observed in the rat following either route of exposure.

**Neurotoxicity** In an acute oral neurotoxicity screening study in rats, tebuconazole produced transient neurobehavioral effects without correlating morphological changes in neural tissues.

In a subchronic dietary neurotoxicity screening study in rats, tebuconazole did not produce any neurobehavioral symptoms or any microscopic lesions in neural tissues or skeletal muscle.

In a one-generation developmental neurotoxicity study in rats, dietary concentrations of tebuconazole administered to the dams during gestation and lactation did not cause any specific neurobehavioral effects in the offspring. Clinical signs of toxicity, as well as, developmental toxicity were observed in the offspring, but only in conjunction with maternal toxicity.

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**Mutagenicity** Numerous in vitro and in vivo mutagenicity studies have been conducted on tebuconazole all of which were negative.

### SECTION 12. ECOLOGICAL INFORMATION

**Environmental Precautions** This product is toxic to aquatic invertebrates. Do not apply directly to water. Drift or runoff may harm aquatic invertebrates. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment washwater.

### SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance** Do not reuse empty container. Place empty container in trash.

It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow any applicable state or local guidelines. Refer to the product label for other disposal instructions. Never place unused product down any indoor or outdoor drain.

**RCRA Classification** Not established

### SECTION 14. TRANSPORT INFORMATION

**TRANSPORTATION CLASSIFICATION:**  
Not regulated for transportation

**FREIGHT CLASSIFICATION:**  
Insecticides or Fungicides, N.O.I.; other than poison

### SECTION 15. REGULATORY INFORMATION

**EPA Registration No.** 72155-14

#### US Federal Regulations

**TSCA list**

1,2-Propylene glycol 57-55-6

**TSCA 12b export notification**

None

**SARA Title III - section 302 - notification and information**

None

**SARA Title III - section 313 - toxic chemical release reporting**

None

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### US States Regulatory Reporting

#### CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

#### US State right-to-know ingredients

1,2-Propylene glycol	57-55-6	PA, RI
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### Canadian Regulations

#### Canadian Domestic Substance List

1,2-Propylene glycol	57-55-6
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### Environmental

#### CERCLA

None

#### Clean Water Section 307 Priority Pollutants

None

#### Safe Drinking Water Act Maximum Contaminant Levels

None

### International Regulations

#### EU Classification

None

#### European Inventory of Existing Commercial Substances (EINECS)

1,2-Propylene glycol	57-55-6
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## SECTION 16. OTHER INFORMATION

NFPA	Health	Flammability	Reactivity	Others
	0	1	0	

REASON FOR REVISION: Revised the following sections: 1. removed common name, changed address and removed caution statement; 2. removed inert ingredients; 3. removed last statement in emergency overview, it is in section 8; 5. removed the non-explosive statement; 6. removed user defined text in general and disposal and land spill or leaks; 7. added handling procedures; 9. removed specific gravity and entered density value; 12. removed acute toxicity to aquatic invertebrates because the toxic statement is in environmental precautions; 13. removed user defined text in general disposal guidance and added remark to RCRA classification and 16. changed NFPA rating on health

Approval Date: 11/18/2003

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## **Bayer Advanced Garden Disease Control for Roses, Flowers & Shrubs Concentrate**

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