



Material Safety Data Sheet

**BAYER ADVANCED DISEASE CONTROL FOR ROSES,
FLOWERS & SHRUBS CONCENTRATE**

MSDS Number: 102000012168
MSDS Version 2.0
Revision Date: 08/31/2005

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED DISEASE CONTROL FOR ROSES, FLOWERS & SHRUBS CONCENTRATE
MSDS Number 102000012168
EPA Registration No. 72155-14
Product Use Systemic fungicide cures and prevents most common plant diseases such as black spot, powdery mildew and rust.

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

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

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Tebuconazole	107534-96-3	2.90
1,2-Propanediol	57-55-6	10.00

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Caution! Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Wash thoroughly with soap and water after handling.

Physical State slightly viscous liquid

Routes of Exposure Ingestion, Inhalation, Eye contact, Skin Absorption

Immediate Effects

Skin Harmful if absorbed through skin. May cause slight irritation. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Harmful if inhaled. Do not breathe vapours or spray mist.

SECTION 4. FIRST AID MEASURES



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General	Have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
Ingestion	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 directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
Inhalation	Move 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.
Notes to Physician Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	> 93.3 °C / > 199.9 °F Method: Setaflash
Suitable Extinguishing Media	dry chemical, foam
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated. Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
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Methods for Cleaning Up Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice Do not allow material to enter streams, sewers, or other waterways or contact vegetation. Use personal protective equipment.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Read label carefully before use.

Storing Procedures Store in original container and out of the reach of children, preferably in a locked storage area. Do not freeze.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection There are no known hazards associated with this product when used according to the label directions. At the same time, the following guidelines should be used.

Avoid inhalation of vapour or mist. Avoid contact with skin and eyes.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Do not allow children and pets to enter the treated area until it has dried.

Eye/Face Protection protective eyewear.

Hand Protection rubber gloves

Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State slightly viscous liquid

pH 5.0 - 8.0

Density 0.989 g/ml at 20 °C

Viscosity 400 - 1,000 mPa.s at 25 °C

SECTION 10. STABILITY AND REACTIVITY



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Chemical Stability Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been performed on this product as formulated. The acute toxicology information provided below is from a similar formulation containing a higher percentage of the active ingredient, tebuconazole. The non-acute information pertains to the active ingredient, tebuconazole.

Acute Oral Toxicity male/female rat: LD50: > 2,000 mg/kg

Acute Dermal Toxicity male/female rat: LD50: > 4,000 mg/kg

Acute Inhalation Toxicity male/female rat: LC50: > 1.975 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

male/female rat: LC50: > 7.9 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Skin Irritation rabbit: slight irritation

Eye Irritation rabbit: non-irritant

Sensitization guinea pig: Non-sensitizing

Subchronic 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/m³).

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.



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OSHA
None.

**Reproductive &
Developmental Toxicity**

REPRODUCTION: 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).

DEVELOPMENTAL TOXICITY: 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.

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 wash water.



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SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal
Guidance**

Do not re-use empty containers. 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. Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Never place unused product down any indoor or outdoor drain.

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-Propanediol 57-55-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

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-Propanediol 57-55-6 MN, RI

Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol 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

European Inventory of Existing Commercial Substances (EINECS)

1,2-Propanediol

57-55-6

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Re-numbered due to system update; Updated sections as needed.

Revision Date: 08/31/2005

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.