Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Bayer Advanced Garden All-in-One Rose &amp; Flower Care Concentrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td></td>
</tr>
<tr>
<td>Common Name</td>
<td></td>
</tr>
<tr>
<td>MSDS Number</td>
<td>1936</td>
</tr>
<tr>
<td>Chemical Family</td>
<td></td>
</tr>
<tr>
<td>Chemical Formulation</td>
<td></td>
</tr>
<tr>
<td>EPA Registration No.</td>
<td>72155-21</td>
</tr>
</tbody>
</table>

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
3 Systemic Products-in-One. Bayer Advanced Garden All-in-One Rose & Flower Care's exclusive formula feeds and protects against insects & diseases in one easy step. It provides 6 weeks protection against the major problems of Roses, Hibiscus, Iris and other Flowers and Shrubs. No spraying is necessary, just mix and pour this formula around the base of the plant.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS No.</th>
<th>Concentration % by Weight Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid Technical</td>
<td>138261-41-3</td>
<td>0.1300</td>
<td>0.1700</td>
</tr>
<tr>
<td>Tebuconazole</td>
<td>107534-96-3</td>
<td>0.7200</td>
<td>0.8800</td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview
Caution! Hazards to humans and domestic animals. Causes moderate eye irritation. This product is highly toxic to aquatic invertebrates.

Physical State
Low viscosity liquid
Material Safety Data Sheet

Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

MSDS Number: 000000001936
MSDS Version 1.1

Page 2 of 8

Routes of Exposure
- Ingestion, eye and skin contact.

Immediate Effects
- General: Do not allow children and pets to enter the treated area until it has dried.
- Eye: Avoid contact with eyes or clothing. Eye irritation is slight or negligible.
- Skin: Avoid contact with skin.

SECTION 4. FIRST AID MEASURES

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.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point
- > 93.3 °C / > 199.9 °F
- Method: Setaflash Closed Cup

Suitable Extinguishing Media
- Foam, Dry chemical

Fire Fighting Instructions
- Keep out of smoke. Contain runoff.

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 in a secured, dry storage area. Store in cool place.
- Store in an area that is out of reach of children and animals, away from the home or home garden. Keep from freezing.

Work/Hygienic
- Avoid contact with eyes or clothing. Wash hands thoroughly with soap and water.
Material Safety Data Sheet

Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

Procedures

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.

Body Protection

Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

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

General Protection

Follow all label instructions.

Exposure Limits

None Established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Low viscosity liquid

pH

6.5 - 8.0

Density

1.36 - 1.38 g/cm³ at 20 °C

Minimum Explosion Conc. (MEC)

No thermal or impact explosive material
Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

Viscosity
400 - 1,000 mPa.s 25 °C

Other Information
Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability
Do not freeze.
Keep in a dry place.

Hazardous Polymerization
(Conditions to avoid)
Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity
Male and Female Rat: LD50: > 5,000 mg/kg

Acute Dermal Toxicity
Male and Female Rat: LD50: > 5,000 mg/kg

Acute Inhalation Toxicity
Male and Female Rat: LC50: 4-hr exposure to liquid aerosol: > 2.76 mg/l
Maximum attainable concentration.
No deaths

Male and Female Rat: 1-hr exposure to liquid aerosol (extrapolated from 4-hr LC50): > 11 mg/l

Skin Irritation
Rabbit: Mild irritant with all irritation clearing within 72 hours post- treatment.

Eye Irritation
Rabbit: Moderate irritation to the iris and/or conjunctiva with all irritation clearing within 48 hours post-treatment.

Sensitization
Guinea pig: Not a dermal sensitizer.

Sub-Chronic Toxicity
In a 3 week dermal toxicity study, rabbits treated with imidacloprid and tebuconazole showed no local or systemic effects at levels up to and including 1000 mg/kg, the limit dose.
In a 4 week inhalation study, rats exposed to high concentrations of imidacloprid exhibited decreased body weight gains and changes in clinical chemistries and organ weights.
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.

In chronic dietary studies in rats and dogs exposed to imidacloprid, slight effects on the thyroids and/or liver were observed at high doses.
Material Safety Data Sheet

Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

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).

In oncogenicity studies in rats and mice, imidacloprid was not carcinogenic in either species.

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).

In a two generation reproduction study in rats, imidacloprid was not a primary reproductive toxicant. Offspring exhibited reduced body weights at the high dose and in conjunction with maternal 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.

In developmental toxicity studies in rats and rabbits, there was no evidence of an embryotoxic or teratogenic potential for imidacloprid. In both species, slight developmental effects were observed only at high doses and in conjunction with maternal toxicity.

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.

In acute and subchronic neurotoxicity screening studies in rats, imidacloprid
produced slight neurobehavioral effects in each study at the highest dose tested. There were no correlating morphological changes in the neural tissues in either study. In a one-generation developmental neurotoxicity screening study in rats, offspring exposed to imidacloprid showed decreased body weights and motor activities. These effects occurred only at the highest dose tested and in conjunction with maternal toxicity. There were no correlating morphological changes observed in the neural tissues.

**Mutagenicity**

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

The imidacloprid mutagenicity studies, taken collectively, demonstrate that the active ingredient is not genotoxic or mutagenic.

**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental Precautions**

Do not apply directly to water. 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 posion

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.**

72155-21
Material Safety Data Sheet

Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

US Federal Regulations
TSCA list
  None
TSCA 12b export notification
  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
  None

Canadian Regulations
Canadian Domestic Substance List
  None

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)
  None

SECTION 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
Material Safety Data Sheet

Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate

REASON FOR REVISION: Revised the following sections: 1. removed common name, changed address and removed caution statement; 2. removed inert ingredients; 3. changed phrase in immediate effects general 5. removed the non-explosive statement; 6. removed user defined text in general and disposal and land spill or leaks; 7. removed user defined text in handling procedures; 8. exposure limits are none established; 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

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