MSDS Number: 000000001936

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

MSDS Version 1.1

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	Bayer Advanced Garden All-in-One Rose & Flower Care Concentrate
Chemical Name	
Common Name	
MSDS Number	1936
Chemical Family	
Chemical Formulation	
EPA Registration No.	72155-21

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

Hazardous Component Name	CAS No.	Concentration % by Weight	
		Minimum	Maximum
Imidacloprid Technical	138261-41-3	0.1300	0.1700
Tebucanazole	107534-96-3	0.7200	0.8800

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

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

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

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 irriation 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.

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 re- duced body weights at the high dose and in conjunction with maternal toxicity.

Tebuconazole produced teratogenic effects in conjunction with maternal toxicity in mice and rabits 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

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

	Health	Flammability	Reactivity	Others
NFPA	0	1	0	

Material Safety Data Sheet

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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