



Material Safety Data Sheet

BAYER ADVANCED 12 MONTH TREE & SHRUB PROTECT & FEED CONCENTRATE

MSDS Number: 102000018075
MSDS Version 1.0
Revision Date: 05/03/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED 12 MONTH TREE & SHRUB PROTECT & FEED
CONCENTRATE
MSDS Number 102000018075
EPA Registration No. 72155-76

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>
Imidacloprid	138261-41-3	1.47
Phosphoric acid	7664-38-2	2.37
Potassium chloride	7447-40-7	1.69
Glycerine	56-81-5	
Ammonia, anhydrous	7664-41-7	

SECTION 3. HAZARDS IDENTIFICATION

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

<u>Emergency Overview</u>	Caution! Harmful if swallowed or absorbed through skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.
Physical State	liquid
Appearance	white to off-white
Immediate Effects	
Eye	Moderate eye irritation. Avoid contact with eyes.
Skin	Harmful if absorbed through skin. Avoid contact with skin and clothing.
Chronic or Delayed Long-Term	This product or its components may have target organ effects.



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Potential Environmental Effect Toxic to aquatic invertebrates.

SECTION 4. FIRST AID MEASURES

General	When possible, 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 physician or poison control center immediately.
Skin	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. 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 physician or poison control center immediately.
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	> 93.4 °C / 200.1 °F
Suitable Extinguishing Media	Water spray, Carbon dioxide (CO2), Dry chemical, Foam
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES



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- Personal Precautions** Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.
- Methods for Cleaning Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
- Additional Advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

- Handling Procedures** Handle and open container in a manner as to prevent spillage.
- Storing Procedures** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- General Protection** There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.
 - 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, using the toilet or applying cosmetics.
 - Do not allow children or pets to enter the treated area until it has dried.

Exposure Limits

Phosphoric acid	7664-38-2	ACGIH	TWA	1 mg/m3
		ACGIH	STEL	3 mg/m3
		NIOSH	REL	1 mg/m3
		NIOSH	STEL	3 mg/m3
		OSHA Z1	PEL	1 mg/m3
		OSHA Z1A	TWA	1 mg/m3
		OSHA Z1A	STEL	3 mg/m3
		US CA OEL	TWA PEL	1 mg/m3
		US CA OEL	STEL	3 mg/m3
Glycerine	56-81-5	ACGIH	TWA	10 mg/m3
		Form of exposure	Mist.	
		OSHA Z1	PEL	5 mg/m3
		Form of exposure	Respirable fraction.	



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		OSHA Z1	PEL		15 mg/m3
		Form of exposure		Total dust.	
		OSHA Z1A	TWA		5 mg/m3
		Form of exposure		Respirable fraction.	
		OSHA Z1A	TWA		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		10 mg/m3
		Form of exposure		Total dust.	
Ammonia, anhydrous	7664-41-7	ACGIH	TWA		25 ppm
		ACGIH	STEL		35 ppm
		NIOSH	REL	25 ppm	18 mg/m3
		NIOSH	STEL	35 ppm	27 mg/m3
		OSHA Z1	PEL	50 ppm	35 mg/m3
		OSHA Z1A	STEL	35 ppm	27 mg/m3
		US CA OEL	TWA PEL	25 ppm	18 mg/m3
		US CA OEL	STEL	35 ppm	27 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to off-white
Physical State	liquid
pH	6 - 7.5 (100 %) at 20 °C
Density	approx. 1.066 g/cm ³ at 20 °C

SECTION 10. STABILITY AND REACTIVITY

Hazardous Reactions Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have been bridged from a similar formulation containing a higher percentage of the active ingredient, imidacloprid. The non-acute information pertains to the technical-grade active ingredient.

Acute Oral Toxicity	male rat: LD50: > 4,870 mg/kg
	female rat: LD50: 4,143 mg/kg
Acute Dermal Toxicity	rabbit: LD50: > 2,000 mg/kg



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Acute Inhalation Toxicity rat: LC50: > 5.3 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

rat: LC50: > 20 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Skin Irritation rabbit: No skin irritation.

Eye Irritation rabbit: Minimally irritating.

Sensitization guinea pig: Non-sensitizing.

Chronic Toxicity Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

Assessment Carcinogenicity

Imidacloprid was not carcinogenic in studies in rats and mice.

ACGIH
None.
NTP
None.
IARC
None.
OSHA
None.

Reproductive & Developmental Toxicity REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY: Imidacloprid is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

Neurotoxicity Imidacloprid showed slight behavioral and activity changes only at the highest dose tested in neurotoxicity studies in rats. There were no correlating morphological changes observed in the neural tissues.

Mutagenicity Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION



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Environmental Precautions Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance 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.

Container Disposal Do not re-use empty containers. Triple rinse containers. Place empty container in trash. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated for Domestic Surface Shipment

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

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-76

US Federal Regulations

TSCA list

Phosphoric acid 7664-38-2
Potassium chloride 7447-40-7
Glycerine 56-81-5
Ammonia, anhydrous 7664-41-7

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

Ammonia, anhydrous 7664-41-7

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Ammonia, anhydrous 7664-41-7 1.0%

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.



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US State Right-To-Know Ingredients

Phosphoric acid	7664-38-2	CA, CT, IL, MN, PA, RI
Glycerine	56-81-5	IL, MN, RI
Ammonia, anhydrous	7664-41-7	CA, CT, IL, LA, MA, MN, NJ, PA, RI

Canadian Regulations

Canadian Domestic Substance List

Phosphoric acid	7664-38-2
Potassium chloride	7447-40-7
Glycerine	56-81-5
Ammonia, anhydrous	7664-41-7

Environmental

CERCLA

Phosphoric acid	7664-38-2	5,000 lbs
Ammonia, anhydrous	7664-41-7	100 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Phosphoric acid	7664-38-2
Potassium chloride	7447-40-7
Glycerine	56-81-5
Ammonia, anhydrous	7664-41-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 05/03/2007

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