

# Bayer Environmental Science



## Material Safety Data Sheet

### BAYER ADVANCED 12 MONTH TREE & SHRUB PROTECT & FEED CONCENTRATE

#### 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

Hazardous Component Name	CAS-No.	Average % by Weight
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.  
Emergency Overview

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.

MSDS Number: 102000018075

MSDS Version 1.0

Revision Date: 05/03/2007



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**BAYER ADVANCED 12 MONTH TREE & SHRUB**

**PROTECT & FEED CONCENTRATE**

Potential Environmental Effect      Toxic to aquatic invertebrates.

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### 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

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 (CO<sub>2</sub>), 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 ACGIH NIOSH NIOSH OSHA Z1 OSHA Z1A OSHA Z1A US CA OEL US CA OEL ACGIH	TWA STEL REL STEL PEL TWA STEL TWA PEL STEL TWA	1 mg/m3 3 mg/m3 1 mg/m3 3 mg/m3 1 mg/m3 1 mg/m3 3 mg/m3 1 mg/m3 3 mg/m3 10 mg/m3 Mist.
	56-81-5	Form of exposure OSHA Z1 Form of exposure	PEL	Respirable fraction. 5 mg/m3



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OSHA Z1	PEL	15 mg/m <sup>3</sup>
OSHA Z1A	Form of exposure TWA	Total dust. 5 mg/m <sup>3</sup>
OSHA Z1A	Form of exposure TWA	Respirable fraction. 10 mg/m <sup>3</sup>
US CA OEL	Form of exposure TWA PEL	Total dust. 5 mg/m <sup>3</sup>
US CA OEL	Form of exposure TWA PEL	Respirable fraction. 10 mg/m <sup>3</sup>
ACGIH	TWA	25 ppm
ACGIH	STEL	35 ppm
NIOSH	REL	25 ppm
NIOSH	STEL	35 ppm
OSHA Z1	PEL	50 ppm
OSHA Z1A	STEL	35 ppm
US CA OEL	TWA PEL	25 ppm
US CA OEL	STEL	35 ppm

## 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<sup>3</sup> 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

##### 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

#### U.S. 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

### 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  
Glycerine  
Ammonia, anhydrous

7664-38-2  
56-81-5  
7664-41-7

CA, CT, IL, MN, PA, RI  
IL, MN, RI  
CA, CT, IL, LA, MA, MN, NJ, PA, RI

#### Canadian Regulations

##### Canadian Domestic Substance List

Phosphoric acid  
Potassium chloride  
Glycerine  
Ammonia, anhydrous

7664-38-2  
7447-40-7  
56-81-5  
7664-41-7

#### Environmental

##### CERCLA

Phosphoric acid  
Ammonia, anhydrous

7664-38-2  
7664-41-7

5,000 lbs  
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  
Potassium chloride  
Glycerine  
Ammonia, anhydrous

7664-38-2  
7447-40-7  
56-81-5  
7664-41-7

#### SECTION 16. OTHER INFORMATION

##### NFPA 704 (National Fire Protection Association):

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