



Material Safety Data Sheet

**BAYER ADVANCED 3-IN-1 TREE & SHRUB PLANT
STARTER READY-TO-USE THROW PACK**

MSDS Number: 102000018723

MSDS Version 1.0

Revision Date: 03/19/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name BAYER ADVANCED 3-IN-1 TREE & SHRUB PLANT STARTER READY-TO-USE THROW PACK
MSDS Number 102000018723
EPA Registration No. 72155-79

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	0.69
Potassium chloride	7447-40-7	
Diammonium hydrogenorthophosphate	7783-28-0	
Calcium carbonate	1317-65-3	

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Caution! Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes and clothing.

Physical State granular

Appearance brownish

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

Immediate Effects

Eye Causes eye irritation. Avoid contact with eyes.

Skin Harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Avoid breathing dust.



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Chronic or Delayed Long-Term This product or its components may have target organ effects.

Potential Environmental Effect Highly 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 not applicable

Fire and Explosion Hazards Dangerous gases are evolved in the event of a fire.

Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

Suitable Extinguishing Media Water, Carbon dioxide (CO2), Dry chemical, Foam



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**Fire Fighting
Instructions**

Keep out of smoke. Fight fire from upwind position. Cool closed containers/
tanks exposed to fire with water spray. 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

Personal Precautions

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled
product or contaminated surfaces.

Methods for Cleaning Up

Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable
container for disposal. Clean contaminated floors and objects thoroughly,
observing environmental regulations.

Additional Advice

Material can create slippery conditions. Use personal protective equipment. Do
not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures

Maintain exposure levels below the exposure limit through the use of general
and local exhaust ventilation. 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.

**Work/Hygienic
Procedures**

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

Remove Personal Protective Equipment (PPE) immediately after handling this
product. Before removing gloves clean them with soap and water. Remove
soiled clothing immediately and clean thoroughly before using again. Wash
thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection

Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such
instructions for washables, use detergent and warm/tepid water. Keep and wash



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PPE separately from other laundry.

- Eye/Face Protection** Tightly fitting safety goggles
- Hand Protection** Chemical resistant nitrile rubber gloves
- Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.
- Respiratory Protection** When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

Imidacloprid	138261-41-3	OES BCS*		0.7 mg/m3
Calcium carbonate	1317-65-3	NIOSH	REL	5 mg/m3
		NIOSH	REL	10 mg/m3
		OSHA Z1	PEL	5 mg/m3
		OSHA Z1	PEL	15 mg/m3
		OSHA Z1A	TWA	5 mg/m3
		OSHA Z1A	TWA	15 mg/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** brownish
- Physical State** granular
- pH** 7.4
- Bulk Density** 60 - 65 lb/ft³

SECTION 10. STABILITY AND REACTIVITY

- Conditions to Avoid** Extremes of temperature and direct sunlight.
- Incompatibility** Acids
Oxidizing agents
Halogenated compounds
Brass
Copper
Aluminium



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Zinc

Hazardous Decomposition Products Thermal decomposition can lead to release of:
Nitrogen oxides (NOx)
Hydrogen chloride (HCl)
Carbon oxides
Ammonia
Sulphur oxides
oxides of potassium

Hazardous Reactions No hazardous reactions when stored and handled according to prescribed instructions.
Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute Oral Toxicity rat: LD50: > 4,820 mg/kg

Acute Dermal Toxicity rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity rat: LC50: > 5.1 mg/l
Exposure time: 4 h
Determined in the form of dust.

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

Skin Irritation rabbit: No skin irritation.

Eye Irritation rabbit: Mild eye irritation.

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



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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

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 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 container label instructions and applicable local guidelines. Dispose in accordance with all local, state/provincial and federal regulations.

Container Disposal Do not re-use empty containers. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
Not regulated for any modes of transportation

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



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SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-79

US Federal Regulations

TSCA list

Potassium chloride 7447-40-7
Diammonium hydrogenorthophosphate 7783-28-0
Calcium carbonate 1317-65-3

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

Diammonium hydrogenorthophosphate 7783-28-0 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.

US State Right-To-Know Ingredients

Calcium carbonate 1317-65-3 MN, RI

Canadian Regulations

Canadian Domestic Substance List

Potassium chloride 7447-40-7
Diammonium hydrogenorthophosphate 7783-28-0

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

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



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