



Material Safety Data Sheet

BAYER ADVANCED 12-MONTH TREE & SHRUB PROTECT AND FEED READY-TO-USE GRANULES II

MSDS Number: 102000021169

MSDS Version 1.0

Revision Date: 06/04/2010

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name BAYER ADVANCED 12-MONTH TREE & SHRUB PROTECT AND FEED READY-TO-USE GRANULES II
MSDS Number 102000021169
EPA Registration No. 72155-96

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. 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. Wash thoroughly with soap and water after handling.

Physical State granular

Appearance yellow to brown

Exposure routes Skin contact, Eye contact, Ingestion

Immediate Effects

Eye Causes eye irritation. Avoid contact with eyes.

Skin May cause irritation. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Inhalation not likely. Avoid breathing dust.

Medical Conditions Aggravated by Exposure No specific medical conditions are known which may be aggravated by exposure to this product.

Potential Environmental Effect Highly toxic to aquatic invertebrates.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Imidacloprid	138261-41-3	0.55
Clothianidin	210880-92-5	0.275

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	Treat symptomatically. There is no specific antidote.

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. 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 Use personal protective equipment.

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 crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.

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

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 breathing dust. Avoid contact with skin and eyes.

Do not allow children or pets to enter the treated area until granules have been watered into the soil and the grass or soil is dry.



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Eye/Face Protection Safety glasses with side-shields
Hand protection Chemical resistant nitrile rubber gloves
Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

Exposure Limits

Imidacloprid	138261-41-3	OES BCS*	TWA	0.7 mg/m3
Clothianidin	210880-92-5	OES BCS*	TWA	2.8 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance yellow to brown
Physical State granular
Bulk density 55 - 65 lb/ft³

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid Heat, flames and sparks.

Hazardous Decomposition Products Thermal decomposition
Hydrogen chloride (HCl)
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide
nitrogen oxides (NOx)
ammonia
biuret
cyanuric acid
oxides of iron
oxides of magnesium
oxides of manganese
Oxides of phosphorus
oxides of potassium
formaldehyde
Sulphur oxides

Chemical Stability Stable under recommended storage conditions.



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been conducted on this product as formulated. The acute toxicity data provided has been bridged from a similar product, Merit 0.5% on 32-5-7 Granular Fertilizer. The non-acute information pertains to the active ingredients.

- Acute oral toxicity** male/female combined rat: LD50: > 5,136 mg/kg
- Acute dermal toxicity** male/female combined rat: LD50: > 2,000 mg/kg
- Acute inhalation toxicity** male/female combined rat: LC50: > 5.016 mg/l
Exposure time: 4 h
Determined in the form of dust.
(actual)
- male/female combined rat: LC50: > 20 mg/l
Exposure time: 1 h
Determined in the form of dust.
Extrapolated from the 4 hr LC50.
(actual)
- Skin irritation** rabbit: Mild skin irritation.
- Eye irritation** rabbit: Mild eye irritation.
- Sensitisation** guinea pig: Non-sensitizing.
- Chronic toxicity** Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

Clothianidin caused effects in the liver, kidney and/or ovaries following chronic exposure to high doses in mice, rats and dogs.

Assessment Carcinogenicity

Imidacloprid was not carcinogenic in studies in rats and mice.

Clothianidin was not carcinogenic in lifetime feeding studies in rats and mice.

- ACGIH**
None.
- NTP**
None.
- IARC**
None.
- OSHA**
None.

Reproductive toxicity REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-



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generation study in rats.

Clothianidin is not considered a reproductive toxicant at non-maternally toxic dose levels.

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

Clothianidin was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rabbits but were considered secondary to 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.

Clothianidin was not a neurotoxicant in acute, subchronic and developmental neurotoxicity screening studies in rats.

Mutagenicity

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

Clothianidin was not 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 apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. 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. Do not allow to get into surface water, drains and ground water.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations. If burned, stay out of smoke.

RCRA Information

Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.



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SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-96

US Federal Regulations

TSCA list

None.

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

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.



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SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Reactivity - 1 Others -

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: 06/04/2010

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