

MSDS Number: 102000011910 MSDS Version 1.0 Revision Date: 08/24/2005

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	BAYER ADVANCED COMPLETE BRAND INSECT KILLER FOR GARDENS READY-TO-USE
MSDS Number EPA Registration No. Product Use	102000011910 432-1211-72155 Insecticide for use on Fruits, Trees, Vegetables, Ornamentals, Shrubs, Roses and Flowers

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
Carbaryl	63-25-2	0.126

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section Emergency Overview	n 11 for detailed toxicological information. Caution! Harmful by inhalation and if swallowed. Av Avoid contact with skin, eyes and clothing.	oid breathing spray mist.
Physical State	liquid opaque	
Odor	none	
Appearance	white	
Routes of Exposure	Ingestion, Inhalation, Eye contact, Skin contact	
Immediate Effects Eye	May cause eye irritation. Avoid contact with eyes.	
Skin	May cause slight irritation. Avoid contact with skin a	and clothing.
Ingestion	Harmful if swallowed. Do not take internally.	
Inhalation	Harmful if inhaled. Avoid breathing spray mist.	

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Medical Conditions Aggravated by Exposure	Any disease, medication or prior exposure which reduces normal cholinesterase activity may increase susceptibility to the toxic effects of the active ingredient.	
SECTION 4. FIRST AID MEA	ASURES	
General	Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
Еуе	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.	
Skin	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.	
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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.	
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 poison control center or doctor for further treatment advice.	
Notes to Physician Signs and Symptoms	This product causes reversible cholinesterase inhibition. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced signs and symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions.	
Treatment	ANTIDOTE: Atropine sulphate. Carbaryl is an N-Methylcarbamate that inhibits cholinesterase. Drugs like 2-Pam (pyridine-2-aldoxime methiodide) are not recommended. Narcotics and other sedative should not be used.	

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	The product is not flammable.
Suitable Extinguishing Media	chemical foam, carbon dioxide (CO2), water fog



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Fire Fighting Keep out of smoke. Fight fire from upwind position. Move containers from fire area if without risk. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

Wear self-contained breathing apparatus and protective suit.

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	Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material). Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional Advice	Use personal protective equipment. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Do not apply as a space spray while food processing is underway. Keep away from food, drink and animal feeding stuffs.
Storing Procedures	Store in an area that is out of reach of children and animals, away from the home or home garden.
	Do not freeze.
Min/Max Storage Temperatures	Do not transport or store above 38 °C / 100 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection There are no known hazards associated with this product when used according to the label directions. At the same time, the following guidelines should be used.

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, or using the toilet.

Do not allow children and pets to enter the treated area until it has dried.



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Engineering Controls	Ensure adequate ventilation. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.			
Eye/Face Protection	protective eye	protective eyewear.		
Hand Protection	Latex gloves or rubber gloves			
Body Protection	Wear long-sleeved shirt and long pants and shoes plus socks.			
Respiratory Protection	No personal respiratory protective equipment normally required.			
Exposure Limits Carbaryl	63-25-2	ACGIH NIOSH OSHA Z1 OSHA Z1A US CA OEL	TWA REL PEL TWA TWA PEL	5 mg/m3 5 mg/m3 5 mg/m3 5 mg/m3 5 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white
Physical State	liquid opaque
Odor	none
рН	3 - 4 (100 %)
Density	1.001 g/cm³ at 20 °C
Decomposition Temperature	140 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Sustained temperatures above 100°F.
Incompatibility	alkalines strong acids
Hazardous Decomposition Products	nitrogen oxides (NOx) Sulphur oxides Carbon oxides



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methyl isocyanate

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been performed on this product as formulated. The acute toxicity data provided has been bridged from a SEVIN dust formulation containing a higher percentage of the active ingredient, carbaryl. The long-term information pertains to the technical-grade active ingredient.

Acute Oral Toxicity	rat: LD50: > 1,500 mg/kg
Acute Dermal Toxicity	rabbit: LD50: > 2,000 mg/kg
Eye Irritation	rabbit: Irritation is transient.
Chronic Toxicity	Reversible cholinesterase inhibition occurred in chronic toxicity studies in rats and dogs. The principal organs affected in rats from long-term exposure to high- doses of carbaryl included the urinary bladder, thyroid, kidneys and liver.

Assessment Carcinogenicity

Carbaryl has been shown to cause tumors in laboratory animals in lifetime feeding studies.

ACGIH Carbaryl NTP None. IARC Carbaryl OSHA None.		63-25-2 63-25-2	Group A4 Overall evaluation: 3
Reproductive & Developmental Toxicity	REPRODUCTION: Carbaryl was not a reproductive toxicant in a two-generation study in rats. DEVELOPMENTAL TOXICITY: Carbaryl was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in both species but were considered secondary to maternal toxicity.		
Neurotoxicity	Carbaryl caused transient neurobehavioral effects (e.g., tremors) related to cholinergic toxicity without correlating neuropathological changes in acute and subchronic neurotoxicity studies in rats. Carbaryl did not cause developmental neurotoxic effects in offspring in a one-generation developmental neurotoxicity study in rats.		
Mutagenicity		0,	studies have been conducted on that carbaryl poses only a slight



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SECTION 12. ECOLOGICAL INFORMATION

Toxicity to Fish	Oncorhynchus mykiss (rainbow trout) LC50: 1,950 μg/l Exposure time: 96 h The value mentioned relates to the active ingredient. Dietary concentrations.
	Bluegill sunfish LC50: 6,769 μg/l Exposure time: 96 h The value mentioned relates to the active ingredient. Dietary concentrations.
Toxicity to Other Organisms	Mallard duck LC50: >5,000 mg/kg Exposure time: 8 d The value mentioned relates to the active ingredient.
	Bobwhite quail LC50: > 5,000 mg/kg Exposure time: 8 d The value mentioned relates to the active ingredient. Dietary concentrations.
Environmental Precautions	Extremely toxic to aquatic and estuarine invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
	This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.
	Causes injury to Boston Ivy, Virginia Creeper and Maidenhair fern. During early season, may injure Virginia and Sand pines.

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 any applicable state or local guidelines. Never place unused product down any indoor or outdoor drain.
Container Disposal	Do not re-use empty containers. Place empty container in trash. Can be offered for recycling, re-conditioning or puncture.



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RCRA Classification: The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole.

63-25-2 Carbaryl US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): U279

63-25-2 Carbaryl US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U279

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION: Not regulated for transportation

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

SECTION 15. REGULATOR	Y INFORMATION						
EPA Registration No.	432-1211-72155						
US Federal Regulations							
TSCA list							
Carbaryl		63-25-2					
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							
Carbaryl		63-25-2		1.0%			
US States Regulatory Repo	orting						
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-Kno	w Ingredients						
Carbaryl		63-25-2	CA, CT, IL, MA, MN, NJ, PA,	RI			
Canadian Regulations Canadian Domestic Su None.	ubstance List						



100 lbs

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Environmental CERCLA Carbaryl 63-25-2 Clean Water Section 307 Priority Pollutants None. Safe Drinking Water Act Maximum Contaminant Levels None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS) Carbaryl 63-25-2

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association): Health - 1 Flammability - 0 Reactivity - 1 Others - none 0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Re-numbered due to system update.

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