



DELTAGARD GC GRANULAR INSECTICIDE

MSDS Version 2.1

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name DELTAGARD GC GRANULAR INSECTICIDE
Chemical Name Mixture; active ingredient, deltamethrin
Synonym
MSDS Number 1673
Chemical Family
Chemical Formulation
EPA Registration No. 432-1240
Canadian Registrat. No.

Bayer Environmental Science
 95 Chestnut Ridge Road
 Montvale, NJ 07645
 USA

For Product Use Information: (800)331-2867 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

Product Use Description DELTAGARD GC GRANULAR INSECTICIDE is a broad spectrum residual pyrethroid insecticide for the controls of major surface feeding insect pests on golf courses, sod farms, ornamental landscape plantings and perimeter around commercial, recreational and residential areas.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Deltamethrin	52918-63-5	0.0500	
Other ingredients		99.9500	

Material Safety Data Sheet

MSDS Number: 000000001673

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Version 2.1

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview

CAUTION. HAZARDS TO HUMAN AND DOMESTIC ANIMALS

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

Physical State

solid

Odor

Strong shoe-polish, mothball and salty solvent like

Appearance

tan

Routes of Exposure

Ingestion and skin contact.

Immediate Effects

Eye

Causes moderate eye irritation.

Ingestion

Harmful if swallowed.

SECTION 4. FIRST AID MEASURES

Eye

Hold eyes 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. Call a poison control center or doctor for treatment advice

Skin

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion

Call a Poison Control Center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor.

Inhalation

Move person 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.

Note to Physician

Have the product container or label with you when calling a poison control center or doctor for treatment.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Carbon Dioxide, Dry Chemical, Foam, or Water.

Fire Fighting

As in any fire, wear self-contained breathing apparatus pressure-demand,

Material Safety Data Sheet

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Number: 000000001673
MSDS Version 2.1

Instructions MSHA/NIOSH approved (or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal Sweep up and remove to chemical waste area.

SECTION 7. HANDLING AND STORAGE

Handling Procedures

- Avoid contact with eyes or clothing.
- Food utensils such as spoons and measuring cups must not be used for food purposes after use in measuring pesticides.
- Do not allow children or pets on treated areas until granules have been watered into the soil and the grass or soil is dry.

Storing Procedures Store in original container in a secured, dry storage area.

Prevent cross-contamination with other pesticides and fertilizers. If the container is leaking or material is spilled, sweep up and remove to chemical waste area.

Work/Hygienic Procedures

- (1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- (2) Remove clothing if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- (3) Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face Protection Safety glasses or goggles.

Applicators and othe handlers must wear:
Long sleeved shirt and long pants
Waterproof gloves
Shoes plus socks

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nueries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during

Material Safety Data Sheet

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Number: 000000001673

MSDS Version 2.1

application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

NONAGRICULTURAL USE REQUIREMENTS

The following are the requirement for uses of this products that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Wear protective clothing when using or handling this product to help avoid exposure to eyes and skin. Eye protection, gloves, a long sleeved shirt and long legged pants or coveralls are recommended.

Exposure Limits

None Established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	tan
Physical State	solid
Odor	Strong shoe-polish, mothball and salty solvent like
pH	N/A
Vapor Pressure	N/A
Vapor Density (air = 1)	N/A
Specific Gravity	N/A
Density	52.3 lb/ft ³ or 0.84 g/cm ³ (fluffed); 61.2 lb/ft ³ or 0.98 g/cm ³ (compacted)

Material Safety Data Sheet

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Number: 000000001673

MSDS Version 2.1

Boiling Point	N/A
Melting/Freezing Point	N/A
Solubility (in water)	soluble
Viscosity	N/A
Other Information	EVAPORATION RATE: N/A

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Incompatibility	Strong oxidizers, bases, chlorates, and nitrates.
Hazardous Products of Decomposition	Ammonia and sulfur trioxide.
Hazardous Polymerization (Conditions to avoid)	Will not occur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	(Rat) LD50 = 2613 mg/kg Slightly toxic
Acute Dermal Toxicity	(Rabbit): LD50 > 5,050 mg/kg Practically non-toxic
Skin Irritation	(Rabbit) Non-irritating Primary Irritation Index = 0.1/8.0
Eye Irritation	(Rabbit) Slightly irritating Max. Ave. Score = 16.7/110
Sensitization	(Guinea pig): Non-sensitizing

THE FOLLOWING DATA WERE DEVELOPED WITH: deltamethrin technical, the active ingredient

Chronic Toxicity	General neurological symptoms were exhibited in studies with rats, mice and dogs. These symptoms were exhibited in studies with rats, mice and dogs. These symptoms included unsteadiness, abnormal gait, tremors and liquid feces. No histopathological findings were observed except some signs of slight hepatotoxicity in mice. No Observable Effect Levels (NOEL's) were 1 mg/kg/day in the 2-year rat and dog studies. The NOEL for the 2-year mouse study was approximately 12 mg/kg/day. Deltamethrin was not carcinogenic in rats or mice.
-------------------------	---

Material Safety Data Sheet

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Number: 000000001673
MSDS Version 2.1

Assessment Carcinogenicity

ACGIH

None

NTP

None

IARC

Deltamethrin

52918-63-5

3

OSHA

None

Reproductive & Developmental Toxicity

No developmental effects were observed in studies with rabbits in the absence of maternal toxicity. The development NOEL for the rat study was 11 mg/kg/day (highest does tested). The developmetal NOEL in rabbits was 25 mg/kg/day. A 2-generation reproductive study with rates produced clinical signs of toxicity, reduced body weight gain and mortality in both parents and offspring. The parental and reproductive (offspring) NOEL's were 80 ppm which is equivalent to approximately 4 mg/kg/day for adults and 18 mg/kg/day for the offspring.

Neurotoxicity

Deltamethrin does not inhibit acetylcholinesterase. Neurobehavioral effects including unsteadiness, excessive salivation, vomiting, liquid feces, uncoordinated movement, tremors, spasmodic convulsions which are typically related to Central Nervous System (CNS) stimulation, were observed in some studies. The NOEL for these studies was 1 mg/kg/day or higher.

Mutagenicity

No evidence of genotoxicity was observed in a battery of in vitro and in vivo studies.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

This product is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Use with care when applying in areas adjacent to any body of water. Do not contaminate water when disposing of equipment washwaters.

Ecological Information

Deltamethrin Technical is highly toxic to fish and other aquatic species, however, the toxicity of avian species is relatively low.

THE FOLLOWING DATA WERE DEVELOPED WITH: Technical Deltamethrin

Avian

Bobwhite Quail (LD50): > 2250 mg/kg

Bobwhite Quail (Dietary LC50): > 5620 ppm

Mallard Duck (Dietary LC50): > 8039 ppm

Quail Reproduction (repro NOEL): 450 ppm

Duck Reproduction (repro NOEL): 450 ppm

Aquatic

Material Safety Data Sheet

MSDS Number: 000000001673
MSDS Version 2.1

DELTAGARD GC GRANULAR INSECTICIDE

Rainbow Trout (96-Hour LC50): 0.26 ppb
Bluegill Sunfish (96-Hour LC50): 0.17 ppb
Sheepshead Minnow: (96-Hour LC50): 0.48 ppb
Eastern Oyster: (96-Hour LC50): 8.2 ppb
Mysid Shrimp: (96-Hour LC50): 4.6 ppt; NOEC = 1. ppt
Mollusk Shell Deposition (EC50): 8.0 ppb
Chronic Toxicity-Fathead Minnow: MATC = 24 ppt
Chronic Daphnia Toxicity: MATC = 6.0 ppt

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Completely empty container (by shaking and tapping sides and bottom) into application equipment. Dispose of bag in a sanitary landfill or by incineration if allowed by state and local authorities. If burned, stay out of smoke.

RCRA CLASSIFICATION:

RCRA HAZARDOUS WASTE INGREDIENT: None

RCRA Classification

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not DOT Regulated

SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No. 432-1240

TSCA list

None

TSCA 12b export notification

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

None

US States Regulatory

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.

Material Safety Data Sheet

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Number: 000000001673

MSDS Version 2.1

US State right-to-know ingredients

None

Canadian Regulations

Canadian Registrat. No.

Canadian Domestic Substance List

None

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

International Regulations

EU Classification

Deltamethrin

52918-63-5

Toxic Dangerous for the environment

R Phrases

Also toxic by inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrases

Keep locked-up and out of the reach of children. Avoid contact with the skin. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

European Inventory of Existing Commercial Substances (EINECS)

Deltamethrin

52918-63-5

SECTION 16. OTHER INFORMATION

*Would recommend Protection Rating "E" for poorly ventilated areas.

REVISED SECTIONS:

MSDS REVISION INDICATOR: Company name change.

Print Date: 12/10/2002

Supersedes MSDS, which is older than: 12/10/2002

Material Safety Data Sheet

DELTAGARD GC GRANULAR INSECTICIDE

MSDS Number: 000000001673

MSDS Version 2.1

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer AG. Bayer Environmental Science