SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier
Trade name                   DELTAGARD® G INSECTICIDE GRANULE
Product code (UVP)            79020090
SDS Number                   102000015309
EPA Registration No.          432-836

Relevant identified uses of the substance or mixture and uses advised against
Use                          Insecticide
Restrictions on use          See product label for restrictions.

Information on manufacturer
Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.
Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577 (24 hours/day)
Product Information Telephone Number 1-800-331-2867
SDS Information or Request    SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Other hazards
No particular hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deltamethrin</td>
<td>52918-63-5</td>
<td>0.10</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

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.

Skin contact
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.

Eye contact
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.

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.

Most important symptoms and effects, both acute and delayed

Symptoms
To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

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

Unsuitable
None known.

Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for fire-fighters
Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information

Keep out of smoke. Fight fire from upwind position. Evacuate personnel to safe areas. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point
not applicable
SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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

Methods and materials for containment and cleaning up

Methods for cleaning up
Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed container. Decontaminate tools and equipment following cleanup. Contaminated soil may have to be removed and disposed.

Additional advice
Do not allow product to contact non-target plants. Do not allow to enter soil, waterways or waste water canal. Contact Bayer for further assistance if necessary.

Reference to other sections
Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Hygiene measures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers
Store in original container. 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.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deltamethrin</td>
<td>52918-63-5</td>
<td>0.02 mg/m³ (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>10 mg/m³ (TWA)</td>
<td>02 2012</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>10 mg/m³ (REL)</td>
<td>2010</td>
<td>NIOSH</td>
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<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>5 mg/m³ (REL)</td>
<td>2010</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>15 mg/m³ (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
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<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>5 mg/m³ (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>15 mg/m³ (TWA)</td>
<td>1989</td>
<td>OSHA Z1A</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>5 mg/m³ (TWA)</td>
<td>1989</td>
<td>OSHA Z1A</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>50 ug/m³ (AN ESL)</td>
<td>03 2012</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>50 ug/m³ (ST ESL)</td>
<td>03 2012</td>
<td>TX ESL</td>
</tr>
</tbody>
</table>

No control parameters known.

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

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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.

Hand protection
Chemical resistant nitrile rubber gloves

Eye protection
Safety glasses with side-shields

Skin and body protection
Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures
Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.
**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>grey to tan</td>
</tr>
<tr>
<td>Physical State</td>
<td>granular</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>no data available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>55 - 63 lb/ft³</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
</tr>
<tr>
<td>Minimum Ignition Energy</td>
<td>no data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Explosivity</td>
<td>no data available</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>no data available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous</td>
<td></td>
</tr>
<tr>
<td>reactions</td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
</tbody>
</table>
Conditions to avoid
Incompatible materials
Hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes
Immediate Effects
Eye
Ingestion

Information on toxicological effects
Acute oral toxicity
Acute dermal toxicity
Skin irritation
Eye irritation
Sensitisation

Assessment repeated dose toxicity
Deltamethrin caused neurobehavioral effects and/or neuropathological changes in animal studies. The toxic effects of Deltamethrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment Mutagenicity
Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH
None.

NTP
None.

IARC
Deltamethrin 52918-63-5 Overall evaluation: 3

OSHA
None.

Assessment toxicity to reproduction
Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.

**Assessment developmental toxicity**

Deltamethrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Deltamethrin are related to maternal toxicity.

**Further information**

Acute toxicity studies have been bridged from a similar formulation(s).

The non-acute information pertains to the active ingredient(s).

### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity to fish**

\[ \text{LC50 (Oncorhynchus mykiss (rainbow trout))} \ 0.00091 \text{ mg/l} \]

Exposure time: 96 h

The value mentioned relates to the active ingredient deltamethrin.

**Toxicity to aquatic invertebrates**

\[ \text{EC50 (Daphnia magna (Water flea))} \ 0.00056 \text{ mg/l} \]

Exposure time: 48 h

The value mentioned relates to the active ingredient deltamethrin.

**Toxicity to aquatic plants**

\[ \text{EC50 (Algae)} > 9.1 \text{ mg/l} \]

Exposure time: 96 h

The value mentioned relates to the active ingredient deltamethrin.

**Biodegradability**

Deltamethrin: ; not rapidly biodegradable

**Koc**

Deltamethrin: Koc: 10240000

**Bioaccumulation**

Deltamethrin: Bioconcentration factor (BCF) 1,400; Does not bioaccumulate.

**Mobility in soil**

Deltamethrin: Immobile in soil

**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.

Do not allow to get into surface water, drains and ground water.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Product**

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

Dispose in accordance with all local, state/provincial and federal regulations.

**Contaminated packaging**

Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.

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.

SECTION 14: TRANSPORT INFORMATION

49CFR
Not dangerous goods / not hazardous material

IMDG
UN number 3077
Class 9
Packaging group III
Marine pollutant YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DELTAMETHRIN MIXTURE)

IATA
UN number 3077
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DELTAMETHRIN MIXTURE)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-836
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.

International Regulations
European Inventory of Existing Commercial Substances (EINECS)
Deltamethrin 52918-63-5

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed.
Moderate eye irritation.
Avoid contact with skin, eyes and clothing.
Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
Health - 1  Flammability - 1  Instability - 0  Others - none

Health - 1  Flammability - 1  Physical Hazard - 0  PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard
**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

**Revision Date:** 11/10/2014

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