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

Product identifier

Trade name: DELTAGARD® INSECTICIDE
Product code (UVP): 81015694
SDS Number: 102000025884
EPA Registration No.: 432-1534

Relevant identified uses of the substance or mixture and uses advised against

Use: Insecticide
Restrictions on use: No restrictions known.

Information on manufacturer

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

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
Eye irritation: Category 2B
Skin sensitisation: Category 1B

Signal word: Warning

Hazard statements
Causes eye irritation.
May cause an allergic skin reaction.

Precautionary statements
Wash thoroughly after handling.
Avoid breathing mist and spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Specific measures (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local regulation.

Other hazards
No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deltamethrin</td>
<td>52918-63-5</td>
<td>2.00</td>
</tr>
<tr>
<td>Trade Secret Ingredient(s)</td>
<td></td>
<td>31.35</td>
</tr>
</tbody>
</table>

Identity and specific percent composition of one or more Trade Secret materials is being withheld.

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
No symptoms known or expected.

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

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
Fight fire from upwind position. Keep out of smoke. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point
no data available

Autoignition temperature
no data available

Lower explosion limit
no data available

Upper explosion limit
no data available

Explosivity
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
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice
Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

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
Use only in area provided with appropriate exhaust ventilation. Ensure adequate 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 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.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers
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.

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>
</tbody>
</table>

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

Additional advice
This product contains material which are Trade Secret and may have Occupational Exposure Limits.

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

- **Appearance**: white
- **Physical State**: emulsion
- **Odor**: characteristic
- **Odour Threshold**: no data available
- **pH**: 5.0 - 8.0 at 100 %
- **Vapor Pressure**: no data available
- **Vapor Density (Air = 1)**: no data available
- **Density**: 1.02 g/cm³
- **Evaporation rate**: no data available
- **Boiling Point**: no data available
- **Melting / Freezing Point**: no data available
- **Water solubility**: dispersible
- **Minimum Ignition Energy**: not applicable
- **Decomposition temperature**: not applicable
- **Partition coefficient: n-octanol/water**: no data available
- **Viscosity**: 135 - 500 mPa.s
- **Flash point**: no data available
- **Autoignition temperature**: no data available
- **Lower explosion limit**: no data available
- **Upper explosion limit**: no data available
- **Explosivity**: not applicable

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity**
  - **Thermal decomposition**: not applicable
  - **Chemical stability**: Stable under normal conditions.
Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
no data available

Incompatible materials
no data available

Hazardous decomposition products
No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes
Inhalation, Ingestion, Eye contact

Immediate Effects
Eye
Causes eye irritation.

Ingestion
Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity
LD50 (rat) 3,129 mg/kg

Acute inhalation toxicity
LC50 (rat) > 5.07 mg/l
Exposure time: 4 h

Acute dermal toxicity
LD50 (rabbit) > 5,000 mg/kg

Skin irritation
No skin irritation (rabbit)

Eye irritation
Mild eye irritation. (rabbit)

Sensitisation
Sensitising (mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)

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
Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish
LC50 (Rainbow trout (Oncorhynchus mykiss)) 0.00091 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient deltamethrin.

Toxicity to aquatic invertebrates
EC50 (Water flea (Daphnia magna)) 0.00056 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient deltamethrin.

Toxicity to aquatic plants
EC50 (Algae) > 9.1 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 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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Dispose in accordance with all local, state/provincial and federal regulations.

Contaminated packaging
Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

**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**: 3082
- **Class**: 9
- **Packaging group**: III
- **Marine pollutant**: YES
- **Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

**IATA**
- **UN number**: 3082
- **Class**: 9
- **Packaging group**: III
- **Environm. Hazardous Mark**: YES
- **Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DELTAMETHRIN SOLUTION)

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.

**SECTION 15: REGULATORY INFORMATION**

This product contains material(s) which are Trade Secret and are on various Regulatory Lists. These material(s) are not listed below.

**EPA Registration No.**
432-1534

**US Federal Regulations**
None.

**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:
Keep out of the reach of children.
Harmful if swallowed.
Causes eye irritation.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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: Reviewed and updated for general editorial purposes. The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 11: Toxicological Information. Section 12. Ecological information. Section 14: Transport Information.

Revision Date: 04/04/2014

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