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

Product identifier
Trade name: DELTADUST® INSECTICIDE
Product code (UVP): 05952247
SDS Number: 102000004846
EPA Registration No.: 432-772

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

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

Responsible Department: Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.
Emergency Telephone Number (24hr/ 7 days): 1-800-334-7577
Product Information Telephone Number: 1-800-331-2867

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 other 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>0.05</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>2.50</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>1317-65-3</td>
<td>95.4</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.

Advice for firefighters
Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

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

Flash point
not applicable

Autoignition temperature
no data available
Lower explosion limit  not applicable
Upper explosion limit  not applicable
Explosivity  no data available
Dust explosion class  no data available

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  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. 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  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 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>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable fraction.)</td>
<td>14808-60-7</td>
<td>0.025 mg/m³ (TWA)</td>
<td>02 2012</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable dust.)</td>
<td>14808-60-7</td>
<td>0.05 mg/m³ (REL)</td>
<td>2010</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable dust.)</td>
<td>14808-60-7</td>
<td>0.1 mg/m³ (TWA)</td>
<td>1989</td>
<td>OSHA Z1A</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable dust.)</td>
<td>14808-60-7</td>
<td>0.1 mg/m³ (TWA)</td>
<td>06 2008</td>
<td>TN OEL</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable)</td>
<td>14808-60-7</td>
<td>0.27µg/m³ (AN ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable)</td>
<td>14808-60-7</td>
<td>14µg/m³ (ST ESL)</td>
<td>03 2014</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable dust.)</td>
<td>14808-60-7</td>
<td>0.1 mg/m³ (TWA PEL)</td>
<td>08 2010</td>
<td>US CA OEL</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Total dust.)</td>
<td>14808-60-7</td>
<td>0.3 mg/m³ (TWA PEL)</td>
<td>08 2010</td>
<td>US CA OEL</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable.)</td>
<td>14808-60-7</td>
<td>0.1 mg/m³ (TWA)</td>
<td>2000</td>
<td>Z3</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Total dust.)</td>
<td>14808-60-7</td>
<td>0.3 mg/m³ (TWA)</td>
<td>2000</td>
<td>Z3</td>
</tr>
<tr>
<td>Crystalline quartz &lt;br&gt; (respirable) &lt;br&gt; (Respirable.)</td>
<td>14808-60-7</td>
<td>2.4millions of particles per cubic foot of air (TWA)</td>
<td>2000</td>
<td>Z3</td>
</tr>
<tr>
<td>Calcium carbonate &lt;br&gt; (Respirable.)</td>
<td>1317-65-3</td>
<td>5 mg/m³ (REL)</td>
<td>2010</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Calcium carbonate &lt;br&gt; (Total)</td>
<td>1317-65-3</td>
<td>10 mg/m³ (REL)</td>
<td>2010</td>
<td>NIOSH</td>
</tr>
<tr>
<td>Calcium carbonate &lt;br&gt; (Respirable fraction.)</td>
<td>1317-65-3</td>
<td>5 mg/m³ (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>Calcium carbonate &lt;br&gt; (Total dust.)</td>
<td>1317-65-3</td>
<td>15 mg/m³ (PEL)</td>
<td>02 2006</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>1317-65-3</td>
<td>5 mg/m³</td>
<td>1989</td>
<td>OSHA Z1A</td>
</tr>
</tbody>
</table>
### 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

or

Goggles

**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**

powder

**Odor**

weak characteristic

**Odour Threshold**

no data available

**pH**

no data available

**Vapor Pressure**

no data available

**Vapor Density (Air = 1)**

no data available

**Bulk density**

c. 55.5 lb/ft³(loose)
Evaporation rate: not applicable
Boiling Point: not applicable
Melting / Freezing Point: not applicable
Water solubility: soluble
Minimum Ignition Energy: no data available
Decomposition temperature: no data available
Partition coefficient: n-octanol/water: no data available
Viscosity: not applicable
Flash point: not applicable
Autoignition temperature: no data available
Lower explosion limit: not applicable
Upper explosion limit: not applicable
Explosivity: no data available
Dust explosion class: no data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition: no data available
Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:
No hazardous reactions known.
Conditions to avoid: no data available
Incompatible materials: Strong acids
Hazardous decomposition products: no data available

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Skin contact, Eye contact
Immediate Effects
Skin

May be harmful if absorbed through skin.

Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute oral toxicity</strong></td>
<td>LD50 (rat) &gt; 5,050 mg/kg</td>
</tr>
<tr>
<td><strong>Acute inhalation toxicity</strong></td>
<td>LC50 (rat) &gt; 26.1 mg/l Exposure time: 4 h</td>
</tr>
<tr>
<td></td>
<td>Determined in the form of dust</td>
</tr>
<tr>
<td></td>
<td>LC50 (rat) &gt; 100 mg/l Exposure time: 1 h</td>
</tr>
<tr>
<td></td>
<td>Determined in the form of dust</td>
</tr>
<tr>
<td></td>
<td>Extrapolated from the 4 hr LC50.</td>
</tr>
<tr>
<td><strong>Acute dermal toxicity</strong></td>
<td>LD50 (rabbit) &gt; 2,020 mg/kg</td>
</tr>
<tr>
<td><strong>Skin irritation</strong></td>
<td>No skin irritation (rabbit)</td>
</tr>
<tr>
<td><strong>Eye irritation</strong></td>
<td>No eye irritation (rabbit)</td>
</tr>
<tr>
<td><strong>Sensitisation</strong></td>
<td>Non-sensitizing. (guinea pig)</td>
</tr>
</tbody>
</table>

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

Crystalline quartz (respirable) 14808-60-7 Group A2

NTP

Crystalline quartz (respirable) 14808-60-7

IARC

Deltamethrin 52918-63-5 Overall evaluation: 3
Crystalline quartz (respirable) 14808-60-7 Overall evaluation: 1

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

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 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 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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
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.
Follow advice on product label and/or leaflet.

Contaminated packaging
Triple rinse containers.
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  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
Environn. 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.  432-772
US Federal Regulations
TSCA list
Crystalline quartz (respirable)  14808-60-7
Calcium carbonate  1317-65-3
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 contains a chemical known to the State of California to cause cancer.
Crystalline quartz (respirable) 14808-60-7

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
Crystalline quartz (respirable) 14808-60-7 MN
Calcium carbonate 1317-65-3 MN

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.

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: May be harmful if absorbed through skin. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms
49CFR Code of Federal Regulations, Title 49
ACGIH US. ACGIH Threshold Limit Values
CAS-Nr. Chemical Abstracts Service number
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
IARC US. IARC Monographs on Occupational Exposures to Chemical Agents
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
N.O.S.  Not otherwise specified
NTP  US. National Toxicology Program (NTP) Report on Carcinogens
OECD  Organization for Economic Co-operation and Development
TDG  Transportation of Dangerous Goods
TWA  Time weighted average
UN  United Nations
WHO  World health organisation

**NFPA 704 (National Fire Protection Association):**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>none</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>0</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
<tr>
<td>PPE</td>
<td>-</td>
</tr>
</tbody>
</table>

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** The following sections have been revised: Section 15: Regulatory information.

**Revision Date:** 10/06/2015

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