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

Product identifier
Trade name TEMPO® 1% DUST INSECTICIDE READY TO USE
Product code (UVP) 05173213
SDS Number 102000006700
EPA Registration No. 432-1373

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
Acute toxicity (Oral): Category 4
Eye irritation : Category 2B

Signal word: Warning

Hazard statements
Harmful if swallowed.
Causes eye irritation.

Precautionary statements
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell. Rinse mouth.
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.
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>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyfluthrin</td>
<td>68359-37-5</td>
<td>1.00</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>4.88</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
<td>89.30</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: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable: High volume water jet

Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

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.

Flash point

not applicable

Autoignition temperature

no data available

Lower explosion limit

not applicable

Upper explosion limit

not applicable

Explosivity

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.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

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>Cyfluthrin</td>
<td>68359-37-5</td>
<td>0.01 mg/m³ (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Cyfluthrin (Particulate.)</td>
<td>68359-37-5</td>
<td>5 ug/m³ (AN ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
</tr>
<tr>
<td>Cyfluthrin (Particulate.)</td>
<td>68359-37-5</td>
<td>50 ug/m³ (ST ESL)</td>
<td>02 2013</td>
<td>TX ESL</td>
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<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>0.1 mg/m³ (TWA)</td>
<td>1998</td>
<td>JO TLV</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
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<td>0.05 mg/m³ (REL)</td>
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<td>NIOSH</td>
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<td>0.1 mg/m³ (TWA)</td>
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<td>OSHA Z1A</td>
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<tr>
<td>Crystalline quartz (respirable)</td>
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<td>0.1 mg/m³ (TWA)</td>
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<td>TN OEL</td>
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<tr>
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<td>02 2013</td>
<td>TX ESL</td>
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<tr>
<td>Substance</td>
<td>CAS Number</td>
<td>Exposure Limit</td>
<td>Date</td>
<td>Agency</td>
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<td>-----------------------------------</td>
<td>------------</td>
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<td>------</td>
<td>--------------</td>
</tr>
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<td>14808-60-7</td>
<td>0.27ug/m³</td>
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<td>TX ESL</td>
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<tr>
<td>Crystalline quartz (total dust)</td>
<td>14808-60-7</td>
<td>0.3 mg/m³</td>
<td>08 2010</td>
<td>US CA OEL</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>0.1 mg/m³</td>
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<td>US CA OEL</td>
</tr>
<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
<td>2.4 millions of particles per cubic foot of air</td>
<td>2000</td>
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<tr>
<td>Crystalline quartz (respirable)</td>
<td>14808-60-7</td>
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<td>Z3</td>
</tr>
<tr>
<td>Crystalline quartz (total dust)</td>
<td>14808-60-7</td>
<td>0.3 mg/m³</td>
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<td>Z3</td>
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<tr>
<td>Calcium sulfate (inhalable fraction)</td>
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<td>10 mg/m³</td>
<td>02 2012</td>
<td>ACGIH</td>
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<tr>
<td>Calcium sulfate (total)</td>
<td>13397-24-5</td>
<td>10 mg/m³</td>
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<td>NIOSH</td>
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<tr>
<td>Calcium sulfate (respirable)</td>
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<td>5 mg/m³</td>
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<td>NIOSH</td>
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<td>Calcium sulfate (respirable fraction)</td>
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<td>5 mg/m³</td>
<td>02 2006</td>
<td>OSHA Z1</td>
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<td>OSHA Z1A</td>
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<tr>
<td>Calcium sulfate (respirable fraction)</td>
<td>13397-24-5</td>
<td>5 mg/m³</td>
<td>1989</td>
<td>OSHA Z1A</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>13397-24-5</td>
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<td>TX ESL</td>
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<td>Silica, amorphe</td>
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<td>TX ESL</td>
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<td>Silica, amorphe</td>
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<tr>
<td>Silica, amorphe</td>
<td>7631-86-9</td>
<td>20 millions of particles per cubic foot of air</td>
<td>2000</td>
<td>Z3</td>
</tr>
</tbody>
</table>

*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
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 to light beige

Physical State
powder

Odor
musty

Odour Threshold
no data available

pH
no data available

Vapor Pressure
not applicable

Vapor Density (Air = 1)
not applicable

Bulk density
61 lb/ft³ (bulk density tapped)
35 lb/ft³ (loose)

Evaporation rate
no data available

Boiling Point
not applicable

Melting / Freezing Point
not applicable

Water solubility
dispersible

Minimum Ignition Energy
no data available

Decomposition temperature
c.a. 500 °C

Partition coefficient: n-octanol/water
not applicable

Viscosity
not applicable
Flash point
Autoignition temperature
Lower explosion limit
Upper explosion limit
Explosivity

not applicable
no data available
not applicable
not applicable
no data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition
ca. 500 °C

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Heat, flames and sparks.
Exposure to moisture.

Incompatible materials
no data available

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

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes
Inhalation, Eye contact, Skin Absorption, Ingestion

Immediate Effects
Eye
Moderate eye irritation.

Skin
Can cause irritation to the skin resulting in effects such as burning and/or tingling sensation. May cause irritation, redness. Harmful if absorbed through skin.

Ingestion
Harmful if swallowed.

Inhalation
Harmful if inhaled. May cause upper respiratory tract irritation.

Information on toxicological effects
Acute oral toxicity
LD50 (male rat) 3,084 mg/kg
LD50 (female rat) 1,733 mg/kg

Acute inhalation toxicity
LC50 (male/female combined rat) > 1.18 mg/l
Exposure time: 4 h
Determined in the form of dust.
Highest attainable concentration.
No deaths
LC50 (male/female combined rat) > 4.72 mg/l
Exposure time: 1 h
Determined in the form of dust.
Extrapolated from the 4 hr LC50.

**Acute dermal toxicity**
LD50 (male/female combined rabbit) > 2,000 mg/kg

**Skin irritation**
Slight irritation (rabbit)

**Eye irritation**
Mild eye irritation (rabbit)

**Sensitisation**
Non-sensitizing (guinea pig)

**Assessment repeated dose toxicity**
The toxic effects of Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

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

**Assessment Carcinogenicity**
Cyfluthrin 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 2000

**IARC**
Crystalline quartz (respirable) 14808-60-7 Overall evaluation: 1

**OSHA**
None.

**Assessment toxicity to reproduction**
Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Cyfluthrin is related to parental toxicity.

**Assessment developmental toxicity**
Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Cyfluthrin 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**
LC50 (Oncorhynchus mykiss (Rainbow trout)) 0.00047 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient cyfluthrin.

**Toxicity to aquatic invertebrates**
EC₅₀ (Water flea (Daphnia magna)) 0.00016 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient cyfluthrin.

**Toxicity to aquatic plants**
IC₅₀ (Desmodesmus subspicatus) > 10 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient cyfluthrin.

**Biodegradability**
Cyfluthrin: ; not rapidly biodegradable

**Koc**
Cyfluthrin: Koc: 64300

**Bioaccumulation**
Cyfluthrin: Bioconcentration factor (BCF) 506; Does not bioaccumulate.

**Mobility in soil**
Cyfluthrin: 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.
Dispose in accordance with all local, state/provincial and federal regulations.

**Contaminated packaging**
Do not re-use empty containers.
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. (CYFLUTHRINE MIXTURE)

IATA
UN number 3077
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYFLUTHRINE 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. 432-1373
US Federal Regulations
TSCA list
Crystalline quartz (respirable) 14808-60-7
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 Cyfluthrin 68359-37-5 10,000lbs
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

US State Right-To-Know Ingredients
Cyfluthrin 68359-37-5 NJ
Crystalline quartz (respirable) 14808-60-7 MN

Canadian Regulations
Canadian Domestic Substance List
Crystalline quartz (respirable) 14808-60-7
Calcium sulfate 13397-24-5
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)
Cylfluthrin 68359-37-5
Crystalline quartz (respirable) 14808-60-7

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, inhaled or absorbed through the skin.
Moderate eye irritation.
Do not get in eyes, on skin, or on clothing.
Avoid breathing dust.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
Health - 2 Flammability - 1 Instability - 0 Others - none

Health - 2 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: 09/19/2014

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