

**Bayer Environmental Science**  
SAFETY DATA SHEET



**TEMPO® 1% DUST INSECTICIDE READY TO USE**

Version 3.0 / USA  
102000006700

1/11  
Revision Date: 09/19/2014  
Print Date: 09/20/2014

**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.



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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.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name	CAS-No.	Concentration % by weight
Cyfluthrin	68359-37-5	1.00
Crystalline quartz (respirable)	14808-60-7	4.88
Calcium sulfate	13397-24-5	89.30

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**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	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.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.

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**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**

**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. 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

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**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.

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**SECTION 7: HANDLING AND STORAGE**



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**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**

Components	CAS-No.	Control parameters	Update	Basis
Cyfluthrin	68359-37-5	0.01 mg/m3 (TWA)		OES BCS*
Cyfluthrin (Particulate.)	68359-37-5	5ug/m3 (AN ESL)	02 2013	TX ESL
Cyfluthrin (Particulate.)	68359-37-5	50ug/m3 (ST ESL)	02 2013	TX ESL
Crystalline quartz (respirable)	14808-60-7	0.1 mg/m3 (TWA)	1998	JO TLV
Crystalline quartz (respirable) (Respirable fraction.)	14808-60-7	0.025 mg/m3 (TWA)	02 2012	ACGIH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.05 mg/m3 (REL)	2010	NIOSH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	1989	OSHA Z1A
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	06 2008	TN OEL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	14ug/m3 (ST ESL)	02 2013	TX ESL



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Crystalline quartz (respirable) (Particulate.)	14808-60-7	0.27ug/m3 (AN ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable.)	14808-60-7	2.4millions of particles per cubic foot of air (TWA)	2000	Z3
Crystalline quartz (respirable) (Respirable.)	14808-60-7	0.1 mg/m3 (TWA)	2000	Z3
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA)	2000	Z3
Calcium sulfate (Inhalable fraction.)	13397-24-5	10 mg/m3 (TWA)	02 2012	ACGIH
Calcium sulfate (Total)	13397-24-5	10 mg/m3 (REL)	2010	NIOSH
Calcium sulfate (Respirable.)	13397-24-5	5 mg/m3 (REL)	2010	NIOSH
Calcium sulfate (Total dust.)	13397-24-5	15 mg/m3 (PEL)	02 2006	OSHA Z1
Calcium sulfate (Respirable fraction.)	13397-24-5	5 mg/m3 (PEL)	02 2006	OSHA Z1
Calcium sulfate (Total dust.)	13397-24-5	15 mg/m3 (TWA)	1989	OSHA Z1A
Calcium sulfate (Respirable fraction.)	13397-24-5	5 mg/m3 (TWA)	1989	OSHA Z1A
Calcium sulfate	13397-24-5	5ug/m3 (AN ESL)	03 2012	TX ESL
Calcium sulfate	13397-24-5	50ug/m3 (ST ESL)	03 2012	TX ESL
Silica, amorphe	7631-86-9	6 mg/m3 (REL)	2010	NIOSH
Silica, amorphe (Particulate.)	7631-86-9	27ug/m3 (ST ESL)	02 2013	TX ESL
Silica, amorphe (Particulate.)	7631-86-9	2ug/m3 (AN ESL)	02 2013	TX ESL
Silica, amorphe	7631-86-9	0.8 mg/m3 (TWA)	2000	Z3
Silica, amorphe	7631-86-9	20millions of particles per cubic foot of air (TWA)	2000	Z3

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



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**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.

<b>Respiratory protection</b>	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.
<b>Hand protection</b>	Chemical resistant nitrile rubber gloves
<b>Eye protection</b>	Goggles
<b>Skin and body protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>General protective measures</b>	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**

<b>Appearance</b>	white to light beige
<b>Physical State</b>	powder
<b>Odor</b>	musty
<b>Odour Threshold</b>	no data available
<b>pH</b>	no data available
<b>Vapor Pressure</b>	not applicable
<b>Vapor Density (Air = 1)</b>	not applicable
<b>Bulk density</b>	61 lb/ft <sup>3</sup> (bulk density tapped) 35 lb/ft <sup>3</sup> (loose)
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	no data available
<b>Decomposition temperature</b>	ca. 500 °C
<b>Partition coefficient: n-octanol/water</b>	not applicable
<b>Viscosity</b>	not applicable



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<b>Flash point</b>	not applicable
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Explosivity</b>	no data available

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**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**

<b>Thermal decomposition</b>	ca. 500 °C
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Heat, flames and sparks. Exposure to moisture.
<b>Incompatible materials</b>	no data available
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>Exposure routes</b>	Inhalation, Eye contact, Skin Absorption, Ingestion
<b>Immediate Effects</b>	
<b>Eye</b>	Moderate eye irritation.
<b>Skin</b>	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.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled. May cause upper respiratory tract irritation.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (male rat) 3,084 mg/kg LD50 (female rat) 1,733 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (male/female combined rat) > 1.18 mg/l Exposure time: 4 h Determined in the form of dust. Highest attainable concentration.



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	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.
<b>Acute dermal toxicity</b>	LD50 (male/female combined rabbit) > 2,000 mg/kg
<b>Skin irritation</b>	Slight irritation (rabbit)
<b>Eye irritation</b>	Mild eye irritation. (rabbit)
<b>Sensitisation</b>	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
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**NTP**

Crystalline quartz (respirable)	14808-60-7	2000
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**IARC**

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

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**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish** LC50 (Oncorhynchus mykiss (Rainbow trout)) 0.00047 mg/l





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	Exposure time: 96 h The value mentioned relates to the active ingredient cyfluthrin.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Water flea (Daphnia magna)) 0.00016 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient cyfluthrin.
<b>Toxicity to aquatic plants</b>	IC50 (Desmodosmus subspicatus) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient cyfluthrin.
<b>Biodegradability</b>	Cyfluthrin: ; not rapidly biodegradable
<b>Koc</b>	Cyfluthrin: Koc: 64300
<b>Bioaccumulation</b>	Cyfluthrin: Bioconcentration factor (BCF) 506; Does not bioaccumulate.
<b>Mobility in soil</b>	Cyfluthrin: Immobile in soil
<b>Environmental precautions</b>	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.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

<b>Product</b>	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.
<b>Contaminated packaging</b>	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.
<b>RCRA Information</b>	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.

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**SECTION 14: TRANSPORT INFORMATION**

<b>49CFR</b>	Not dangerous goods / not hazardous material
<b>IMDG</b>	
UN number	3077



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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



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**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)**

Cyfluthrin 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

**HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)**

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

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.

