



Material Safety Data Sheet

TEMPO® 1% DUST INSECTICIDE READY TO USE

MSDS Number: 102000006700
 MSDS Version 2.1
 Revision Date: 05/14/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name TEMPO® 1% DUST INSECTICIDE READY TO USE
MSDS Number 102000006700
EPA Registration No. 432-1373

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

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-800-331-2867

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Cyfluthrin	68359-37-5	1.00
Quartz (Silica, Crystalline)	14808-60-7	0.28
Trade Secret Ingredient(s)		

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! 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. Wash thoroughly with soap and water after handling.

Physical State powder

Odor musty

Appearance white to off-white

Routes of Exposure Inhalation, Eye contact, Skin Absorption, Ingestion

Immediate Effects

Eye Moderate eye irritation. Do not get in eyes.

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. Do not get in eyes, on skin, or on clothing.



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Ingestion	Harmful if swallowed. Do not take internally.
Inhalation	Harmful if inhaled. May cause upper respiratory tract irritation. Avoid breathing dust.
Chronic or Delayed Long-Term	This product is not listed as a carcinogen by ACGIH, NTP, IARC or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.
Medical Conditions Aggravated by Exposure	No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.
Potential Environmental Effect	Toxic to fish. Toxic to aquatic organisms.

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
Skin	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.
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.
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.
Notes to Physician Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.



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SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water, Dry chemical
Fire Fighting Instructions	<p>Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

SECTION 7. HANDLING AND STORAGE

Handling Procedures	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.
Storing Procedures	Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.
Work/Hygienic Procedures	<p>Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.</p> <p>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.</p>
Min/Max Storage Temperatures	<p>Do not transport or store below -18 °C / -0 °F</p> <p>Do not transport or store above 38 °C / 100 °F</p> <p>The 30-day storage temperature average must not exceed the recommended</p>



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maximum.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection Follow all label instructions. Train employees in safe use of the product.

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.

Eye/Face Protection Goggles

Hand Protection Chemical resistant nitrile rubber gloves

Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

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.

Exposure Limits

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

Quartz (Silica, Crystalline)	14808-60-7	ACGIH	TWA	0.05 mg/m3
		Form of exposure		Respirable fraction.
		ACGIH NIC	TWA	0.025 mg/m3
		Form of exposure		Respirable fraction.
		NIOSH	REL	0.05 mg/m3
		Form of exposure		Respirable dust.
		OSHA Z1A	TWA	0.1 mg/m3
		Form of exposure		Respirable dust.
		Z3	TWA	2.4 millions of particles per cubic foot of air
		Form of exposure		Respirable.
	Remarks		The value is calculated from a specified equation using a value of 100%. Values lower than 100% will give higher exposure limits. See regulation for specific equation.	
	Z3	TWA	0.1 mg/m3	
	Form of exposure		Respirable.	
	Remarks		The value is calculated from a specified equation using a value of 100%. Values lower than 100% will give higher exposure limits. See	



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	Z3	TWA	regulation for specific equation.	0.3 mg/m3
	Form of exposure		Total dust.	
	Remarks		The value is calculated from a specified equation using a value of 100%. Values lower than 100% will give higher exposure limits. See regulation for specific equation.	
	US CA OEL	TWA PEL	Respirable dust.	0.1 mg/m3
	Form of exposure		Total dust.	0.3 mg/m3
	US CA OEL	TWA PEL		
	Form of exposure		Total dust.	5 mg/m3
	OSHA Z1	PEL	Respirable fraction.	15 mg/m3
	Form of exposure		Total dust.	
	OSHA Z1	PEL		
	Form of exposure		Total dust.	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to off-white
Physical State	powder
Odor	musty
Bulk Density	61 lb./cu.ft. (packed); 35 lb./cu.ft. (fluffed)
Decomposition Temperature	approx. 500 °C

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid	Heat, flames and sparks. Exposure to moisture.
Hazardous Reactions	Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity data has been bridged from a similar formulation containing a higher percentage of the active ingredient, cyfluthrin. The non-acute information pertains to the technical-grade active ingredient.



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Acute Oral Toxicity	male rat: LD50: 3,084 mg/kg female rat: LD50: 1,733 mg/kg
Acute Dermal Toxicity	male/female combined rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	male/female combined rat: LC50: > 1.18 mg/l Exposure time: 4 h Determined in the form of dust. Highest attainable concentration. No deaths male/female combined rat: LC50: > 4.72 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Skin Irritation	rabbit: Slight irritation.
Eye Irritation	rabbit: Mild eye irritation.
Sensitization	guinea pig: Non-sensitizing.
Chronic Toxicity	Cyfluthrin caused clinical signs of toxicity including neurological symptoms in chronic studies in rats and dogs.
Assessment Carcinogenicity	
Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.	
ACGIH	
Quartz (Silica, Crystalline)	14808-60-7 Group A2
NTP	
Quartz (Silica, Crystalline)	14808-60-7
IARC	
Quartz (Silica, Crystalline)	14808-60-7 Overall evaluation: 1
OSHA	
None.	
Reproductive & Developmental Toxicity	REPRODUCTION: Cyfluthrin caused toxicity in offspring at doses producing systemic toxicity in adult rats. DEVELOPMENTAL TOXICITY: Cyfluthrin was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed but were considered secondary to maternal toxicity.
Neurotoxicity	Cyfluthrin caused neurobehavioral effects and/or minimal nerve damage in neurotoxicity studies in mice, rats and hens.
Mutagenicity	Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.



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SECTION 12. ECOLOGICAL INFORMATION

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

General Disposal Guidance 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.

Container Disposal 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.

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not Regulated For Transportation

FREIGHT CLASSIFICATION:
Insecticides or Fungicides, N.O.I., other than poison

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. 432-1373

US Federal Regulations

TSCA list

Quartz (Silica, Crystalline) 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 1.0%

**US States Regulatory Reporting
CA Prop65**



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This product contains a chemical known to the State of California to cause cancer.
Quartz (Silica, Crystalline) 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

Cyfluthrin 68359-37-5 NJ
Quartz (Silica, Crystalline) 14808-60-7 IL, MA, MN, RI

Canadian Regulations

Canadian Domestic Substance List

Quartz (Silica, Crystalline) 14808-60-7

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)

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Quartz (Silica, Crystalline) 14808-60-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Reactivity - 0 Others - none

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

Reason to Revise: Updated Section 11: Toxicological Information.

Revision Date: 05/14/2007

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