



Material Safety Data Sheet
TEMPO® 20 WP INSECTICIDE

MSDS Number: 102000007122
 MSDS Version 1.1
 Revision Date: 02/01/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name TEMPO® 20 WP INSECTICIDE
MSDS Number 102000007122
PCP Registration No. 25673

Bayer CropScience Inc
 #100 - 3131 - 114th Avenue SE
 Calgary, AB T2Z 3X2
 Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-888-283-6847

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Cyfluthrin	68359-37-5	20.00
Quartz (Silica, Crystalline)	14808-60-7	4.00

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. Keep out of reach of children and animals. Avoid breathing dust or spray mist.

Physical State solid powder

Appearance tan

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

Immediate Effects

Eye Wear protective eyewear. Mild eye irritation. Avoid contact with eyes.

Skin Mild skin irritant. May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed.

Inhalation Avoid breathing dust or spray mist. Mist may cause irritation involving the nose, throat and upper respiratory tract during the end use of the product such as during a spray application.



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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	Highly toxic to bees. Toxic to fish and 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

Flash point	not applicable
Autoignition Temperature	Not combustible.
Lower Flammability Limit	not applicable
Upper Flammability Limit	not applicable
Suitable Extinguishing Media	Water, Dry chemical
Fire Fighting Instructions	<p>Fight fire from upwind position. Evacuate personnel to safe areas. 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. Do not enter confined spaces unless adequately ventilated. Use personal protective equipment.
Methods for Cleaning Up	Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed container. Decontaminate tools and equipment following cleanup.
Additional Advice	Information regarding personal protective equipment, see section 8.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	<p>Use only in area provided with appropriate exhaust ventilation.</p> <p>Keep away from heat and sources of ignition.</p>
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. Keep containers tightly closed in a dry, cool and well-ventilated place.
Work/Hygienic Procedures	Wash thoroughly with soap and water after handling.
Min/Max Storage	Recommended minimum transport/storage temperature: 50 °C / 122 °F



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Temperatures The 60-day storage temperature average must not exceed the recommended maximum.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/Face Protection Tightly fitting safety goggles

Hand Protection Chemical resistant nitrile rubber gloves

Body Protection Long-sleeved shirt and long pants 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

Substance	Chemical ID	OEL (QUE)	TWA	Remarks
Quartz (Silica, Crystalline)	14808-60-7			Respirable dust. Exposure must be minimized.
		CAD AB OEL	TWA	0.1 mg/m3
		CAD BC OEL	TWA	0.025 mg/m3
		CAD ON OEL	TWA	0.10 mg/m3
Cyfluthrin	68359-37-5	OES BCS*		Respirable fraction. 0.01 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance tan

Physical State solid powder

Vapor Density (Air = 1) no data available

Bulk Density 20 - 26 lb/ft³

Evaporation rate no data available

Boiling Point not applicable

Melting / Freezing Point no data available



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Partition coefficient: n-octanol/water no data available

SECTION 10. STABILITY AND REACTIVITY

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

Incompatibility methanol
 Alkali metals
 Alkaline earth metals
 Bases
 Light metals

Hazardous Reactions Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the active ingredient, cyfluthrin.

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.
 (actual)

 male/female combined rat: LC50: > 4.72 mg/l
 Exposure time: 1 h
 Determined in the form of dust.
 Highest attainable concentration.
 Extrapolated from the 4 hr LC50.
 (actual)

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



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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

None.

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.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. 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. Do not allow to get into surface water, drains and ground water. 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 apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Do not contaminate water, food, or feed by disposal. 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. Pesticide wastes are acutely toxic and hazardous.

Container Disposal

Do not re-use empty containers. Not completely emptied packagings should be disposed of as hazardous waste.



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SECTION 14. TRANSPORT INFORMATION

TDG (Canada):
Not regulated for road and rail.

SECTION 15. REGULATORY INFORMATION

PCP Registration No. 25673

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

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

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

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.



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SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: Updated for general editorial purposes.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 02/01/2008

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