

**Material Safety Data Sheet****TEMPO® ULTRA WP INSECTICIDE**

MSDS Number: 102000016285

MSDS Version 2.0

Revision Date: 02/26/2007

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name TEMPO® ULTRA WP INSECTICIDE
MSDS Number 102000016285
EPA Registration No. 432-1304

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>
beta-Cyfluthrin	68359-37-5	10.00
Quartz (Silica, Crystalline)	14808-60-7	3.95
Sodium lignosulphonate	8061-51-6	4.00

SECTION 3. HAZARDS IDENTIFICATION

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

<u>Emergency Overview</u>	Caution! Moderate eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Avoid breathing dust or spray mist.
Physical State	powder
Appearance	tan
Routes of Exposure	Eye contact, Skin Absorption, Skin contact, Inhalation
Immediate Effects	
Eye	Moderate eye irritation. Do not get in eyes.
Skin	May cause transient skin redness. May cause skin irritation. May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals. 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	May cause irritation of the mucous membranes. Avoid breathing dust or spray mist. Harmful if inhaled.
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.

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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MSDS Version 2.0**SECTION 5. FIRE FIGHTING MEASURES**

Flash point	not applicable
Suitable Extinguishing Media	Water, Dry chemical
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Do not allow run-off from fire fighting to enter drains or water courses. Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid dust formation. Do not breathe dust. Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.
Methods for Cleaning Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations. Contaminated soil may have to be removed and disposed.
Additional Advice	Do not allow to enter soil, waterways or waste water canal. Use personal protective equipment.

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	Protect from freezing. 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	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.



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Min/Max Storage Temperatures

Do not transport or store above 38 °C / 100 °F
The 30-day storage temperature average must not exceed the recommended maximum.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection

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

Do not allow children or pets to enter the treated area until it has dried.

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

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



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value of 100%. Values lower than 100% will give higher exposure limits. See regulation for specific equation.

Z3	TWA	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	0.1 mg/m3
Form of exposure		Respirable dust.
US CA OEL	TWA PEL	0.3 mg/m3
Form of exposure		Total dust.
OSHA Z1	PEL	5 mg/m3
Form of exposure		Respirable fraction.
OSHA Z1	PEL	15 mg/m3
Form of exposure		Total dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	tan
Physical State	powder
Bulk Density	19 - 26 lb./cu.ft.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Exposure to moisture. Heat, flames and sparks.
Incompatibility	Bases methanol

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have not been performed on TEMPO ULTRA WP containing beta-cyfluthrin, the enriched isomer mixture of the active ingredient, cyfluthrin. The acute toxicology information 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, beta-cyfluthrin.

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Further toxicological information on technical-grade cyfluthrin can be obtained by calling the Product Information Number, which is listed in Section 1 of this MSDS.

Acute Oral Toxicity male rat: LD50: 3,084 mg/kg
female rat: LD50: 1,733 mg/kg

Acute Dermal Toxicity rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity rat: LC50: > 1.18 mg/l
Exposure time: 4 h
Determined in the form of dust.

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: Mild skin irritation.

Eye Irritation rabbit: Mild eye irritation.

Sensitization guinea pig: Non-sensitizing.

Assessment Carcinogenicity**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 DEVELOPMENTAL TOXICITY: Beta-cyfluthrin was not a primary developmental toxicant in rats. Developmental effects were observed but were considered secondary to maternal toxicity.

Neurotoxicity Beta-cyfluthrin produced slight transient neurobehavioral effects in acute, subchronic and developmental neurotoxicity screening studies in rats. These effects occurred at the highest dose tested and without correlating morphological changes in the neural tissues.

Mutagenicity Beta-cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

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**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. 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 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**

Pesticide wastes are hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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**DOT CLASSIFICATION:**

Not regulated for Domestic Surface Transportation

FREIGHT CLASSIFICATION:

Insecticides or Fungicides, N.O.I., other than poison

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 432-1304

US Federal Regulations**TSCA list**

Quartz (Silica, Crystalline)	14808-60-7
Sodium lignosulphonate	8061-51-6

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

beta-Cyfluthrin	68359-37-5
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1.0%



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US States Regulatory Reporting

CA Prop65

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

beta-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
Sodium lignosulphonate	8061-51-6

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)

beta-Cyfluthrin	68359-37-5
Quartz (Silica, Crystalline)	14808-60-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2	Flammability - 1	Reactivity - 1	Others - none
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0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated for general editorial purposes. Updated due to new system and numbering scheme.

Revision Date: 02/26/2007

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