Material Safety Data Sheet

TEMPO® ULTRA WP INSECTICIDE

MSDS Number: 102000016285
MSDS Version 2.1
Revision Date: 05/20/2010

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. HAZARDS IDENTIFICATION

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

Emergency Overview 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 solid

Appearance tan

Exposure routes 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.

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 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
beta-Cyfluthrin	68359-37-5	10.00
Sodium lignosulphonate	8061-51-6	4.00
Quartz (Silica, Crystalline) Crystalline quartz (respirable)	14808-60-7	3.95

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 Treat symptomatically. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

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 crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

The 30-day storage temperature average must not exceed the recommended maximum.

Work/Hygienic Wash hands thoroughly with soap and water after handling and before eating,

Procedures	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.
Min/Max Storage Temperatures	Recommended maximum transport/storage temperature: 38 °C / 100 °F

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

beta-Cyfluthrin	68359-37-5	TX ESL	ST ESL	50 ug/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3
		TX ESL	AN ESL	5 ug/m3
		OES BCS*	TWA	0.01 mg/m3
Quartz (Silica, Crystalline)	14808-60-7	ACGIH	TWA	0.025 mg/m3
		NIOSH	REL	0.05 mg/m3
		OSHA Z1A	TWA	0.1 mg/m3
		Z3	TWA	2.4 millions of particles per cubic foot of air
		Z3	TWA	0.1 mg/m3
		Z3	TWA	0.3 mg/m3
		US CA OEL	TWA PEL	0.1 mg/m3
		US CA OEL	TWA PEL	0.3 mg/m3

TX ESL	ST ESL	1 ug/m3
TX ESL	ST ESL	1 ug/m3
TX ESL	AN ESL	0.1 ug/m3
TX ESL	AN ESL	0.1 ug/m3
TX ESL	ST ESL	10 ug/m3
TX ESL	AN ESL	1 ug/m3
	TWA	0.1 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance tan

Physical State powder solid

Bulk density 19 - 26 lb/ft³

SECTION 10. STABILITY AND REACTIVITY

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

Incompatibility Bases
methanol

Chemical Stability Stable under recommended storage conditions.

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.

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

Sensitisation

guinea pig: Non-sensitizing.

Assessment Carcinogenicity

ACGIH		
Quartz (Silica, Crystalline)	14808-60-7	Group A2
NTP		
Crystalline quartz (respirable)		
IARC		
Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1
OSHA		
None.		

Reproductive 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

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.
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

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

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

Sodium lignosulphonate	8061-51-6	
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

beta-Cyfluthrin	68359-37-5	1.0%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.
Crystalline quartz (respirable)

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

Canadian Regulations

Canadian Domestic Substance List

Sodium lignosulphonate	8061-51-6
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)

Quartz (Silica, Crystalline)	14808-60-7

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: The following sections have been revised: Section 3: Composition / Information on Ingredients. Updated for general editorial purposes.

Revision Date: 05/20/2010

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