Material Safety Data Sheet

TEMPO® SC ULTRA INSECTICIDE

MSDS Number: 102000012497
MSDS Version 1.1
Revision Date: 08/29/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	TEMPO® SC ULTRA INSECTICIDE
MSDS Number	102000012497
EPA Registration No.	432-1363

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

Hazardous Component Name	CAS-No.	Average % by Weight
beta-Cyfluthrin	68359-37-5	11.80
1,2-Propanediol	57-55-6	15.20

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. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

Physical State viscous liquid suspension

Odor chalk-like

Appearance white to beige

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

Immediate Effects

Eye Mild eye irritation.

Skin Harmful if absorbed through skin. No skin irritation.

Ingestion Harmful if swallowed.

Inhalation Harmful if inhaled. Avoid breathing spray mist.

Potential Environmental Effect	Highly toxic to bees. Extremely toxic to fish and aquatic invertebrates.

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.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	> 93.4 °C / 200.1 °F
Suitable Extinguishing Media	Water, Foam, Dry chemical
Fire Fighting Instructions	Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Evacuate personnel to safe areas. Keep out of smoke. Do not allow run-off from fire fighting to enter drains or water courses. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with spilled product or contaminated surfaces. Isolate hazard area. Keep unauthorized people away. Use personal protective equipment.
Methods for Cleaning Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Additional Advice	Do not allow product to contact vegetation. Contact Bayer for further assistance if necessary. Information regarding personal protective equipment, see section 8.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate 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. Protect from freezing. Store in original container and out of the reach of children, preferably in a locked storage area.
Work/Hygienic Procedures	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. 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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	Train employees in safe use of the product. Eye wash facility and safety shower should be available. Follow all label instructions. Keep and wash PPE separately from other laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Eye/Face Protection	Tightly fitting safety 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*		0.01 mg/m3
1,2-Propanediol	57-55-6	WEEL	TWA	10 mg/m3
		TX ESL	ST ESL	20 ug/m3
		TX ESL	ST ESL	500 ppm
		TX ESL	AN ESL	2 ug/m3
		TX ESL	AN ESL	50 ppm

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance white to beige

Physical State viscous liquid suspension

Odor chalk-like

pH 4.7

Density approx. 1.06 g/cm³ at 20 °C

SECTION 10. STABILITY AND REACTIVITY

Incompatibility Alkali metals
methanol

Hazardous Reactions Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have been bridged from a very similar formulation containing the active ingredient, Beta-cyfluthrin technical, an enriched isomer mixture of Cyfluthrin technical. The non-acute information pertains to technical-grade Beta-cyfluthrin. Toxicology information on Cyfluthrin technical can be obtained by calling the Product Use Information Number on Page 1.

Acute Oral Toxicity male rat: LD50: 960 mg/kg

female rat: LD50: 1,150 mg/kg

Acute Dermal Toxicity	male/female combined rat: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	male/female combined rat: LC50: > 1.72 mg/l Exposure time: 4 h Highest attainable concentration. Deaths: 1/6 males, 0/6 females male/female combined rat: LC50: > 6.88 mg/l Exposure time: 1 h Extrapolated from the 4 hr LC50.
Skin Irritation	rabbit: No skin irritation.
Eye Irritation	rabbit: Mild eye irritation.
Sensitization	guinea pig: Non-sensitizing.

Assessment Carcinogenicity

ACGIH
None.

NTP
None.

IARC
None.

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

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 allow to get into surface water, drains and ground water.

Do not apply when weather conditions favor runoff or drift. 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. Dispose in accordance with all local, state/provincial and federal regulations.

Container Disposal

Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION:
Not regulated for shipment by any mode of transportation

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

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 432-1363

US Federal Regulations

TSCA list

1,2-Propanediol	57-55-6

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	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

beta-Cyfluthrin	68359-37-5	NJ
1,2-Propanediol	57-55-6	MN, RI

Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol	57-55-6

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 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 1: Chemical Product and Company Information; Updated Section 8: Exposure Controls/Personal Protection; Updated Section 11: Toxicological Information.

Revision Date: 08/29/2008

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