



**Material Safety Data Sheet**  
**AZTEC® 2.1% GRANULAR INSECTICIDE**

MSDS Number: 102000012259  
 MSDS Version 2.1  
 Revision Date: 07/02/2009

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product Name** AZTEC® 2.1% GRANULAR INSECTICIDE  
**MSDS Number** 102000012259  
**EPA Registration No.** 264-813

Bayer CropScience  
 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: 1-866-99BAYER (1-866-992-2937)

**SECTION 2. HAZARDS IDENTIFICATION**

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

**Emergency Overview** Warning! May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Moderate eye irritation. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing.

**Physical State** granular

**Odor** slight of mercaptans

**Appearance** reddish to brown

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

**Immediate Effects**

**Eye** Moderate eye irritation. Avoid contact with eyes.

**Skin** May cause irritation, redness. May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals. Harmful if absorbed through skin. Avoid contact with skin and clothing.

**Ingestion** Do not take internally. May be fatal if swallowed.

**Inhalation** May cause respiratory tract irritation. Harmful if inhaled. Avoid breathing dust or vapor.



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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. Any disease, medication or prior exposure which reduces normal cholinesterase activity may increase susceptibility to the toxic effects of the active ingredient.

**Potential Environmental Effect**

Toxic to fish and wildlife.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Tebupirimfos	96182-53-5	2.00
Cyfluthrin	68359-37-5	0.10
Quartz (Silica, Crystalline) Crystalline quartz (respirable)	14808-60-7	7.80

**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.



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**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  
Signs and  
Symptoms** Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced symptoms.

The symptoms of cholinesterase inhibition include:  
Nausea  
Salivation  
Blurred vision  
constriction of pupils  
Lachrymation

**Hazards** This product contains an anticholinesterase compound. Do not use if under medical advice not to work with such compounds.

**Treatment** The following antidotes are generally accepted: atropin and oximes. The product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves.  
Contraindications: derivatives of morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

**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. Cool closed containers/ tanks exposed to fire with water spray. 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** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.



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**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** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

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.

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

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**General Protection** 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.

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

**Eye/Face Protection** Safety glasses with side-shields

**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.



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**Exposure Limits**

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
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

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

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	reddish to brown
<b>Physical State</b>	granular
<b>Odor</b>	slight of mercaptans
<b>Bulk Density</b>	593 - 673 kg/m3 37 - 42 lb/ft³

**SECTION 10. STABILITY AND REACTIVITY**

<b>Conditions to Avoid</b>	Exposure to moisture. Heat, flames and sparks.
<b>Incompatibility</b>	Strong oxidizing agents Strong bases methanol
<b>Chemical Stability</b>	Stable under recommended storage conditions.



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#### SECTION 11. TOXICOLOGICAL INFORMATION

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

<b>Acute Oral Toxicity</b>	male rat: LD50: 190 mg/kg female rat: LD50: 132 mg/kg
<b>Acute Dermal Toxicity</b>	male/female combined rabbit: LD50: > 2,000 mg/kg
<b>Acute Inhalation Toxicity</b>	male rat: LC50: > 4.92 mg/l Exposure time: 4 h Determined in the form of dust. (actual)  female rat: LC50: 2.86 mg/l Exposure time: 4 h Determined in the form of dust. (actual)  male rat: LC50: > 19.68 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50. (actual)  female rat: LC50: 11.44 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50. (actual)
<b>Skin Irritation</b>	rabbit: Mild skin irritation.
<b>Eye Irritation</b>	rabbit: Mild eye irritation.
<b>Sensitization</b>	guinea pig: Non-sensitizing.
<b>Chronic Toxicity</b>	Tebupirimphos caused cholinesterase inhibition chronic studies in rats, mice and dogs.  Cyfluthrin caused clinical signs of toxicity including neurological symptoms in chronic studies in rats and dogs.
<b>Assessment Carcinogenicity</b>	Tebupirimphos was not carcinogenic in lifetime feeding studies in rats and mice.  Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.



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**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**

**REPRODUCTION:**

Tebupirimphos was not a primary reproductive toxicant in a two-generation reproduction study in rats. Reproductive effects were observed only at doses that caused systemic toxicity in parental animals.

Cyfluthrin caused toxicity in offspring at doses producing systemic toxicity in adult rats.

**DEVELOPMENTAL TOXICITY:**

Tebupirimphos was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rabbits but were considered secondary to maternal toxicity.

Cyfluthrin was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed but were considered secondary to maternal toxicity.

**Neurotoxicity**

Tebupirimphos did not cause delayed neurotoxicity in hens. Neurobehavioral effects related to cholinergic toxicity were observed in acute and subchronic neurotoxicity screening studies in rats. No neuropathological changes were observed in these screening studies.

Cyfluthrin caused neurobehavioral effects and/or minimal nerve damage in neurotoxicity studies in mice, rats and hens.

**Mutagenicity**

Tebupirimphos was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.



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**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. Do not contaminate water, food, or feed by disposal.

**Container Disposal** 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:  
UN2783, Organophosphorus, Pesticides, Solid, Toxic // 6.1 // PG II

IMDG CLASSIFICATION:  
UN2783, Organophosphorus, Pesticides, Solid, Toxic, (Tebuprimphos), // 6.1 // PG II

FREIGHT CLASSIFICATION:  
Insecticides or Fungicides, N.O.I., poison, other than gases that are poisonous by inhalation

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.** 264-813

**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 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**

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



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**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**

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NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: Section 14: Transport Information.

Revision Date: 07/02/2009

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