



**Material Safety Data Sheet**  
**TRILEX® OPTIMUM PEANUT SEED TREATMENT**  
**FUNGICIDE**

MSDS Number: 102000013621  
 MSDS Version 1.0  
 Revision Date: 10/21/2005

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

**Product Name** TRILEX® OPTIMUM PEANUT SEED TREATMENT FUNGICIDE  
**MSDS Number** 102000013621  
**EPA Registration No.** 264-999  
**Product Use** Fungicide for use only by Commercial Seed Treaters.

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. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Captan	133-06-2	49.00
Trifloxystrobin	141517-21-7	2.00
Metalaxyl	57837-19-1	0.80

**SECTION 3. HAZARDS IDENTIFICATION**

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

**Emergency Overview** Caution! Causes eye irritation. Avoid contact with skin, eyes and clothing.

**Physical State** powder

**Appearance** red

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

**Immediate Effects**

**Eye** Causes eye irritation. Do not get in eyes.

**Skin** May be harmful if absorbed through skin. May cause sensitisation by skin contact. May produce an allergic reaction. Avoid contact with skin and clothing.

**Inhalation** Harmful if inhaled. Do not breathe dust.

**SECTION 4. FIRST AID MEASURES**



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<b>General</b>	Have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	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 poison control center or doctor for treatment advice.
<b>Skin</b>	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
<b>Ingestion</b>	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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.
<b>Inhalation</b>	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 poison control center or doctor for further treatment advice.
<b>Notes to Physician Treatment</b>	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

**SECTION 5. FIRE FIGHTING MEASURES**

<b>Flash Point</b>	not applicable
<b>Fire and Explosion Hazards</b>	In case of fire the evolution of dangerous gases is possible.
<b>Suitable Extinguishing Media</b>	water spray, foam, carbon dioxide (CO2), dry chemical
<b>Fire Fighting Instructions</b>	Keep out of smoke. Fight fire from upwind position. Do not allow run-off from fire fighting to enter drains or water courses. Equipment or materials involved in pesticide fires may become contaminated.  Wear self-contained breathing apparatus and protective suit.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	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 and shovel into suitable containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional Advice** Use personal protective equipment. Do not allow material to enter streams, sewers, or other waterways.

**SECTION 7. HANDLING AND STORAGE**

**Handling Procedures** Handle and open container in a manner as to prevent spillage. Avoid contamination of feed and foodstuffs.

**Storing Procedures** Do not contaminate water, food, or feed by storage or disposal.  
 Store in a cool, dry secured 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 clothing immediately if pesticide gets inside. Then 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. As soon as practical, wash thoroughly and change into clean clothing.

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

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

**Engineering Controls** Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

**Eye/Face Protection** tightly fitting safety goggles

**Hand Protection** Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

**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**

Captan	133-06-2	ACGIH	TWA	5 mg/m3
		Form of Exposure	Inhalable fraction.	
Synthetic amorphous silica	112926-00-8	NIOSH	REL	5 mg/m3
		OSHA Z1A	TWA	5 mg/m3
		US CA OEL	TWA PEL	5 mg/m3
		ACGIH	TWA	10 mg/m3
		OSHA Z1A	TWA	6 mg/m3
		NIOSH	REL	6 mg/m3
		OSHA Z1	PEL	5 mg/m3
		Form of Exposure	Respirable fraction.	
		OSHA Z1	PEL	15 mg/m3
		Form of Exposure	Total dust.	
		Z3	TWA	15 millions of particles per cubic foot of air
		Form of Exposure	Respirable fraction.	
		Z3	TWA	50 millions of particles per cubic foot of air
		Form of Exposure	Total dust.	
		Z3	TWA	5 mg/m3
		Form of Exposure	Respirable fraction.	
Z3	TWA	15 mg/m3		
Form of Exposure	Total dust.			
US CA OEL	TWA PEL	5 mg/m3		
Form of Exposure	Respirable fraction.			
US CA OEL	TWA PEL	10 mg/m3		
Form of Exposure	Total dust.			
US CA OEL	TWA PEL	5 mg/m3		
Form of Exposure	Respirable fraction.			
US CA OEL	TWA PEL	10 mg/m3		
Form of Exposure	Total dust.			
US CA OEL	TWA PEL	5 mg/m3		
Form of Exposure	Respirable fraction.			
US CA OEL	TWA PEL	10 mg/m3		
Form of Exposure	Total dust.			
Z3	TWA	20 millions of particles per cubic foot of air		
Z3	TWA	0.8 mg/m3		
Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.		



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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	red
<b>Physical State</b>	powder
<b>Bulk Density</b>	31.6 - 35.5 lbs/cu ft

**SECTION 10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable under normal conditions.
<b>Hazardous Decomposition Products</b>	Thermal decomposition hydrogen chloride (HCl) Carbon monoxide nitrogen oxides (NOx) Sulphur oxides carbon dioxide (CO2)

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute toxicity studies have been bridged from a similar product containing similar percentages of the active ingredients. The non-acute information pertains to the technical-grade active ingredients: Merpan, Trifloxystrobin and Metalaxyl.

<b>Acute Oral Toxicity</b>	rat: LD50: > 5,000 mg/kg (Up and Down Method)
<b>Acute Dermal Toxicity</b>	male/female rat: LD50: > 5,000 mg/kg
<b>Acute Inhalation Toxicity</b>	male/female rat: LC50: > 2.5 mg/l Exposure time: 4 h Determined in the form of dust. (actual)
	male/female rat: LC50: > 10 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50. (actual)
<b>Skin Irritation</b>	rabbit: Slight irritation.
<b>Eye Irritation</b>	rabbit: Mild eye irritation.
<b>Sensitization</b>	guinea pig: Non-sensitizing.



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**Chronic Toxicity** Much of the observed toxicity of merpan (a.k.a. captan) is due to a highly reactive but short-lived metabolite, thiophosgene. Thiophosgene is irritating to skin and mucous membranes. Because of rapid metabolism of captan and high reactivity of its thiophosgene metabolite, these chemicals are unlikely to accumulate.  
 Trifloxystrobin and metalaxyl caused liver effects in chronic studies in mice, rats and/or dogs.

**Assessment Carcinogenicity**  
 EPA has concluded that merpan (a.k.a. captan) is not likely to be a human carcinogen or to pose cancer risks of concern when used in accordance with approved product labeling.  
 Trifloxystrobin and metalaxyl are not carcinogenic based on oncogenicity studies in rats and mice.

<b>ACGIH</b>			
Captan	133-06-2		
<b>NTP</b>			
None.			
<b>IARC</b>			
Captan	133-06-2	Overall evaluation: 3	
<b>OSHA</b>			
None.			

**Reproductive & Developmental Toxicity** **REPRODUCTION**  
 Merpan and trifloxystrobin are not primary reproductive toxicants in multi-generation studies in rats. Reproductive effects were observed only at doses that caused maternal toxicity.  
 Metalaxyl did not cause reproductive toxicity in multi-generation studies in rats.

**DEVELOPMENTAL TOXICITY**  
 Merpan, trifloxystrobin and metalaxyl are not primary developmental toxicants in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity.

**Neurotoxicity** Merpan and metalaxyl neurotoxicity studies are not required at this time.  
 Trifloxystrobin is not a primary neurotoxicant based on an acute (oral gavage) neurotoxicity screening study in rats.

**Mutagenicity** Mutagenicity studies demonstrated that merpan could cause gene mutations in bacteria, in eukaryotic microorganisms and in mammalian cells in culture.  
 Based on the overall weight of evidence, trifloxystrobin and metalaxyl were not genotoxic in a battery of in vitro and in vivo tests.

**SECTION 12. ECOLOGICAL INFORMATION**



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**Environmental Precautions** This pesticide is toxic to fish and aquatic invertebrates. 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.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance** Pesticide wastes are acutely 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** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Do not re-use empty containers. Dispose of bag in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

**SECTION 14. TRANSPORT INFORMATION**

TRANSPORTATION CLASSIFICATION:  
 Not regulated for any modes of Transportation\*

When package contains 10 LBS. of Captan(21 Lbs. = 10 Lbs. of Captan) It is regulated as:  
 \*RQ, Environmentally Hazardous Substances, Solid, N.O.S. ( Captan) // UN3077 // PG III

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

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.** 264-999

**US Federal Regulations**

**TSCA list**

Captan 133-06-2

**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**

Captan 133-06-2 1.0%

**US States Regulatory Reporting**  
**CA Prop65**



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This product contains a chemical known to the State of California to cause cancer.  
Captan 133-06-2

This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

Captan 133-06-2 CA, CT, IL, MA, MN, NJ, PA, RI

**Canadian Regulations**

**Canadian Domestic Substance List**

Captan 133-06-2

**Environmental**

**CERCLA**

Captan 133-06-2 10 lbs

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**

**European Inventory of Existing Commercial Substances (EINECS)**

Captan 133-06-2  
Metalaxyl 57837-19-1

**SECTION 16. OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

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

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

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 10/21/2005

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