



BAYER CROPSCIENCE LP
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Research Triangle Park, NC 27709

For Medical and Transportation Emergencies Only:
Call 24 hours a day 1-800-334-7577
For Product Use Information: Call 1-866-99BAYER (1-866-992-2937)

1. CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME.....: GEM Fungicide
PRODUCT CODE.....: 12941
CHEMICAL NAME.....: Methyl (aE)-a-(methoxyimino)-2-(((E)-(1-(3-(triflourome-
thyl)phenyl)ethylidene)amino)oxy)me
SYNONYMS.....: Trifloxystrobin
PRODUCT USE.....: Fungicide
EPA Registration No.: 264-781

2. COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME
/CAS NUMBER EXPOSURE LIMITS CONCENTRATION (%)

***** HAZARDOUS INGREDIENTS *****

Trifloxystrobin
141517-21-7 OSHA : Not Established 25%
ACGIH: Not Established

Ingredient 2009
Specific chemical identity is withheld as a trade secret.
OSHA : Not Established 3-5 %
ACGIH: Not Established

Ingredient 1081
Specific chemical identity is withheld as a trade secret.
OSHA : Not Established 3-5 %
ACGIH: Not Established

2. COMPOSITION/INFORMATION ON INGREDIENTS (Continued)

INGREDIENT NAME /CAS NUMBER	EXPOSURE LIMITS	CONCENTRATION (%)

Ingredient 2046	Specific chemical identity is withheld as a trade secret.	
	OSHA : Not Established	0.5-1%
	ACGIH: Not Established	

Ingredient 2018	Specific chemical identity is withheld as a trade secret.	
	OSHA : Not Established	1-2 %
	ACGIH: Not Established	

Ingredient 2038	Specific chemical identity is withheld as a trade secret.	
	OSHA : Not Established	15-20 %
	ACGIH: Not Established	

Carrier (contains crystalline silica)		
61790-53-2	OSHA : .10 mg/m3 TWA (respirable)	30-40 %
	ACGIH: .10 mg/m3 TWA (respirable)	

3. HAZARDS IDENTIFICATION:

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*                               EMERGENCY OVERVIEW                               *
*                                                                           *
* CAUTION! Color: Brown; Form: Solid; Granules; Odor: Not                 *
* established; Harmful if absorbed through skin; Causes eye               *
* irritation.                                                                *
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POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY.....: Inhalation; Skin Contact; Skin Absorption;
Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS OF EXPOSURE.....: Based on animal studies of a similar formulation with a higher content of active ingredient, this material is essentially non-toxic by the oral route and mildly toxic by the dermal route of exposure. It is mildly irritating to the eyes and slightly irritating to the skin. Toxicology data indicates this is not sensitizing to the skin; however, the active ingredient is a positive skin sensitizer.

CHRONIC EFFECTS OF EXPOSURE...: This product contains respirable crystalline silica. Excessive long-term exposure to respirable crystalline silica may cause silicosis, a form of progressive pulmonary fibrosis. Severe and permanent lung damage may result.

CARCINOGENICITY.....: This product is not listed as a carcinogen by NTP or IARC, or regulated as a carcinogen by OSHA. However, it may contain

3. HAZARDS IDENTIFICATION (Continued)

crystalline silica (quartz), a substance which is classified by NTP as a Group 2 carcinogen and by IARC as a Group I carcinogen. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although controversial, the carcinogenic potential of crystalline silica must be considered if it is inhaled under excessive exposure conditions. However, the respirable portion of the silica which may be contained in this product is small, such that excessive inhalation exposure during normal conditions of use is unlikely.

NTP.....: Crystalline silica is classified as a NTP Anticipated Human Carcinogen - "Substances or groups of substances that may reasonably be anticipated to be carcinogens."

IARC.....: IARC has classified crystalline silica as a Group 1 carcinogen. "There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica (quartz) from occupational sources."

OSHA.....: Not regulated

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: Individuals with allergic history or pre-existing dermatitis should use extra care in handling this product. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

4. FIRST AID MEASURES:

FIRST AID FOR EYES.....: 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.

FIRST AID FOR SKIN.....: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

FIRST AID FOR INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment information.

FIRST AID FOR INGESTION.: Call 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 told to do so by physician or poison control center. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN.....: There is no specific antidote if this product is ingested. Treat symptomatically.

5. FIRE FIGHTING MEASURES:

FLASH POINT.....: Not Applicable
EXTINGUISHING MEDIA.....: Dry Chemical; Foam; Carbon Dioxide
SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated.
UNUSUAL FIRE / EXPLOSION HAZARDS: None Known

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES.....: Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and use of particulate filter, NIOSH approved per 42 CFR Part 84. Select N or R or P type as appropriate for the oil characteristics of any other air contaminants present. Filter efficiency may range from 95 - 99.97% as appropriate for the size distribution of dusts present. For small spills, sweep up, keeping dust to a minimum, and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE.....: Not Noted
SHELF LIFE.....: Not Noted
SPECIAL SENSITIVITY.....: Not Noted
HANDLING/STORAGE PRECAUTIONS: Store the material in well-ventilated, secure area out of the reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.

8. PERSONAL PROTECTION:

REQUIRED WORK/HYGIENE PROCEDURES...: The following recommendations for exposure control/personal protection are intended for the manufacture, formulation and packaging of the product. For end-use applications consult the product label.

EYE PROTECTION REQUIREMENTS.....: To avoid eye contact, wear safety glasses with side shields or chemical goggles.

SKIN PROTECTION REQUIREMENTS.....: To avoid skin contact, wear rubber gloves, rubber boots, long-sleeved shirt, long pants and a head covering.

RESPIRATOR REQUIREMENTS.....: When needed based on the conditions of use, wear a NIOSH-approved particulate respirator.

ADDITIONAL PROTECTIVE MEASURES.....: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM.....: Solid

APPEARANCE.....: Granules

COLOR.....: Brown

ODOR.....: Not established

BOILING POINT.....: Not Applicable

MELTING/FREEZING POINT....: Not established

SOLUBILITY IN WATER: 0.00061 g/L (trifloxystrobin)

SPECIFIC GRAVITY: Not applicable

BULK DENSITY.....: 29-34 lb/ft³

VAPOR PRESSURE: 2.56 x 10⁻¹¹ Torr @ 20 C (trifloxystrobin)

10. STABILITY AND REACTIVITY:

STABILITY.....: This is a stable material.

HAZARDOUS POLYMERIZATION...: Will not occur.

INCOMPATIBILITIES.....: Not known

INSTABILITY CONDITIONS....: Not known

DECOMPOSITION PRODUCTS....: Not established

11. TOXICOLOGICAL INFORMATION:

Only an eye irritation study has been performed on this product as formulated. All other acute toxicity data are from a similar formulation containing a higher percentage of the active ingredient, trifloxystrobin. The non-acute information pertains to trifloxystrobin technical.

ACUTE TOXICITY

ORAL LD50.....: Male and Female Rat: >5050 mg/kg

DERMAL LD50.....: Male and Female Rat: >2000 mg/kg

INHALATION LC50....: 4 Hr Exposure to Dust: Male and Female Rat: >2.74 mg/L (actual); 1 HR Exposure to Dust (extrapolated from 4 HR): Male and Female Rat: >10.96 mg/L (actual)

EYE EFFECTS.....: Rabbit: Mild irritation to the cornea, iritis and conjunctiva was observed with all irritation clearing completely within 7 days post-treatment.

SKIN EFFECTS.....: Rabbit: Slight dermal irritant.

SENSITIZATION.....: Guinea Pig: Not a dermal sensitizer.

SUBCHRONIC TOXICITY...: In a 28-day dermal toxicity study in rats, trifloxystrobin was tolerated without local effects at doses up to and including the limit dose of 1000 mg/kg/day. Systemic effects were observed in males at the limit dose and included increased organ weights (liver & kidney).

CHRONIC TOXICITY.....: In chronic toxicity studies in mice and dogs, the major primary target organ appears to be the liver following dietary administration of trifloxystrobin. Liver effects were not seen in a chronic toxicity rat study with trifloxystrobin.

CARCINOGENICITY.....: Trifloxystrobin did not cause any treatment-related increase in general tumor incidence, any elevated incidence of rare tumors, or shortened time to the development of palpable or rapidly lethal tumors in an 18-month mouse and a 24-month rat study.

MUTAGENICITY.....: Trifloxystrobin has been tested for its potential to induce gene mutation and chromosomal changes in 5 different test systems. Taken collectively, these studies demonstrate trifloxystrobin is not genotoxic or mutagenic.

DEVELOPMENTAL TOXICITY: In developmental toxicity studies using rats and rabbits, trifloxystrobin was not a primary developmental toxicant.

REPRODUCTION.....: In a two generation reproduction study using rats, trifloxystrobin was not a primary reproductive toxicant.

12. ECOLOGICAL INFORMATION:

This product is toxic to fish and aquatic invertebrates. Contact Bayer Crop Science for specific information. In event of a spill emergency, call the Emergency Response Number listed on page 1.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD.....: Do not reuse product cantainers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

14. TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME.....: Fungicide
FREIGHT CLASS BULK.....: Insecticides or Fungicides; Agricultural,
N.O.S.
FREIGHT CLASS PACKAGE.....: Insecticides or Fungicides; Agricultural,
N.O.S.
PRODUCT LABEL.....: GEM Fungicide

DOT (DOMESTIC SURFACE)

HAZARD CLASS OR DIVISION: Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

15. REGULATORY INFORMATION:

OSHA STATUS.....: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS.....: This product is exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

CERCLA REPORTABLE QUANTITY..: None

SARA TITLE III:

SECTION 302 EXTREMELY

HAZARDOUS SUBSTANCES..: None

SECTION 311/312

HAZARD CATEGORIES.....: Immediate Health Hazard; Delayed Health Hazard

