



Material Safety Data Sheet

METLOCK™ Fungicide

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: METLOCK™ Fungicide
EPA REGISTRATION NUMBER: 59639-171
VC NUMBER(S): 1740
SYNONYM(S): V-10116 3.7 FS

METLOCK is a trademark of Valent U.S.A. Corporation

MANUFACTURER/DISTRIBUTOR

VALENT U.S.A. CORPORATION
P.O. Box 8025
1600 Riviera Avenue, Suite 200
Walnut Creek, CA 94596-8025

EMERGENCY TELEPHONE NUMBERS

HEALTH EMERGENCY OR SPILL (24 hr):
(800) 892-0099
TRANSPORTATION (24 hr.): CHEMTREC
(800) 424-9300 or (202) 483-7616

PRODUCT INFORMATION

AGRICULTURAL PRODUCTS: (800) 682-5368

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

- Harmful if swallowed, inhaled or absorbed through skin.
- May cause skin and respiratory irritation
- Avoid contact with eyes, skin and clothing.
- Avoid breathing vapors or spray mist.
- Keep out of reach of children.

POTENTIAL HEALTH EFFECTS

Acute Toxicity (Primary Routes of Exposure): None known

Acute Eye Contact: This product can cause brief and/or minor eye irritation. The expected adverse health effects resulting from an exposure may include redness and possible swelling.

Acute Skin Contact: This product can cause brief and/or minor irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling. This product is slightly toxic when absorbed through the skin. This product is not expected to cause allergic skin reactions.

Acute Ingestion: This product is slightly toxic when ingested.

Acute Inhalation: This product is slightly toxic when inhaled.

Chronic Toxicity (including cancer): In long-term (> 28 days) studies, Metconazole Fungicide Technical produced toxic effects on the liver, blood, spleen, kidney and gastrointestinal tract. Increased liver adenomas and adenocarcinomas were observed in mice, but these tumors are unlikely to be relevant to humans.

Emergency Telephone: (800) 892-0099
REVISION NUMBER: 3

MSDS NO.: 0372
REVISION DATE: 04/08/2011

Developmental Toxicity (birth defects): At doses producing maternal toxicity malformations were observed in the fetuses of rats and rabbits treated with Metconazole Fungicide Technical during gestation.

Reproductive Toxicity: Metconazole Fungicide Technical was tested in a 2-generation rat reproduction study. At maternally toxic doses, effects were noted on estrus cycling, litter size, gestation length and pup body weight.

Signs and Symptoms of Systemic Effects: No Data Available

Potentially Aggravated Medical Conditions: Individuals with preexisting diseases of the liver or blood may have increased susceptibility to the toxicity of excessive exposures.

For complete discussion of the toxicology data from which this evaluation was made, refer to Section 11. For Ecotox/Environmental Information, refer to Section 12. For Regulatory Information, refer to Section 15.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight/ Percent	Purpose
Metconazole (5-[(4-chlorophenyl)methyl]-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol)	125116-23-6	38-43	Active Ingredient
Glycerine	56-81-5	3-5	Solvent
Other ingredients	Various CAS#s	52-59	Other Ingredients

Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identities are withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document. Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling **(800) 892-0099** at any time.

4. FIRST AID MEASURES

EMERGENCY NUMBER (800) 892-0099

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

EYE CONTACT:

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.

SKIN CONTACT:

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.

INGESTION:

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 told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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 advice.

NOTES TO PHYSICIAN:

Treatment is supportive and symptomatic.

5. FIRE FIGHTING MEASURES

FLASH POINT: > 100° C
FLAMMABLE LIMITS IN AIR - LOWER (%): No data available
FLAMMABLE LIMITS IN AIR - UPPER (%): No data available

NFPA RATING:

Health: 1
 Flammability: 1
 Reactivity: 0
 Special: None

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using professional judgement. Values were not available in the guidelines or published evaluations prepared by the National Fire Protection Association, NFPA.

FIRE FIGHTING INSTRUCTIONS: Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse.

HAZARDOUS DECOMPOSITION PRODUCTS: No data available

6. ACCIDENTAL RELEASE MEASURES

VALENT EMERGENCY PHONE NUMBER: (800) 892-0099
CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300
OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water. For additional spill response information refer to the North American Emergency Response Guidebook.

UN/NA NUMBER: Not applicable **EMERGENCY RESPONSE GUIDEBOOK NO.:** Not applicable

FOR SPILLS ON LAND:

CONTAINMENT: Avoid runoff into storm sewers and ditches which lead to waterways. Contain spilled liquids with dry sorbents.

CLEANUP: Clean up spill immediately. Absorb spill with inert material (such as dry sand or earth), then place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

FOR SPILLS IN WATER:

CONTAINMENT: This material will disperse in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

CLEANUP: Remove contaminated water for treatment or disposal.

7. HANDLING AND STORAGE

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

HANDLING:

Avoid contact with eyes, skin or clothing. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Keep container closed when not in use. Wear protective clothing and equipment when handling this product. Goggles or protective eyewear, gloves, long-sleeved shirt, long pants, socks and shoes are appropriate.

STORAGE:

Keep pesticide in original container. Do not store or transport near food or feed. Do not contaminate food or feed. Do not put concentrate into food or drink containers. Do not dilute concentrate in food or drink containers. Store in a cool, dry place, away from heat, flame and strong acids. To close package, replace and tighten cap to form an airtight seal. Do not store at temperatures below 32° F (0° C). If the product is exposed to temperatures below 32° F (0° C), thaw at room temperature to 50° F (10° C) or warmer and shake gently to unify the product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

EYES & FACE: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

RESPIRATORY PROTECTION: Use this material only in well ventilated areas. If operating conditions result in airborne concentrations of this material, the use of an approved respirator is recommended.

SKIN & HAND PROTECTION: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

EXPOSURE LIMITS

Chemical Name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Metconazole (5-[(4-chlorophenyl)methyl]-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol)	None	None	None
Glycerine	10 mg/m ³ TWA	15 mg/m ³ TWA 5 mg/m ³ TWA	None
Other ingredients	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:	Liquid at 22° C
COLOR:	Opaque white
ODOR:	Slight, Sweet
FLASH POINT:	> 100° C
DENSITY:	1.121 g/mL @ 20° C
SPECIFIC GRAVITY:	1.122 @ 20° C
pH:	5.33 @ 25° C (5% suspension)
VISCOSITY:	114 cP @ 20° C 77 cP @ 40° C
SOLUBILITY:	Dispersible in Water

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable at normal ambient temperatures.
INCOMPATIBILITY:	Not determined
OXIDATION/REDUCTION PROPERTIES:	Not reactive with water, monoammonium phosphate, zinc, and potassium permanganate.

10. STABILITY AND REACTIVITY

EXPLODABILITY: No data available
HAZARDOUS DECOMPOSITION PRODUCTS: No data available

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral Toxicity LD ₅₀ (rats)	> 3129 mg/kg	EPA Tox Category	III
Dermal Toxicity LD ₅₀ (rats)	> 5000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC ₅₀ (rats)	> 2.03 mg/L (4-hour)	EPA Tox Category	IV
Eye Irritation (rabbits)	Mildly irritating	EPA Tox Category	III
Skin Irritation (rabbits)	Slightly irritating	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer	EPA Tox Category	Not applicable

CARCINOGEN CLASSIFICATION

Chemical Name	IARC - Group 1 (carcinogenic to humans)	IARC - Group 2A (Probably carcinogenic)	IARC - Group 2B (Possibly carcinogenic)	NTP Carcinogen List
Glycerine	No	No	No	Not listed
Other ingredients	No	No	No	Not listed
Metconazole (5-[(4-chlorophenyl)methyl]-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol)	No	No	No	Not listed

TOXICITY OF METCONAZOLE TECHNICAL

SUBCHRONIC:

CHRONIC/CARCINOGENICITY: In a one-year dog study, Metconazole Fungicide Technical produced effects on liver histopathology, increase serum liver enzymes and bleeding/irritation in the gastrointestinal tract. The NOEL was 11.1 mg/kg/day. In a 2-year study in rats, Metconazole Fungicide Technical produced histological changes in the liver, kidney and adrenal and possibly leukemia. The NOEL for this study was 4.8 mg/kg/day. In an 18-month mouse study, increased white blood cell count, increased serum liver enzymes increased liver weights, histopathological changes in the liver, spleen and adrenal and increased liver adenomas and adenocarcinomas were observed at doses of 300 ppm or higher. The NOEL in mice was 4.8 mg/kg/day. The mechanism of liver tumor formation in mice is believed to be not relevant to humans.

DEVELOPMENTAL TOXICITY: Maternal and fetal effects were observed in rats and rabbits treated with Metconazole Fungicide Technical during gestation. The NOELs in rats and rabbits are 16 and 20 mg/kg/day, respectively.

REPRODUCTION: Metconazole Fungicide Technical was tested in a 2-generation rat reproduction study. At maternally toxic doses effects were noted on estrus cycling, litter size, gestation length and pup body weight. The NOEL was 10.6 mg/kg/day.

MUTAGENICITY: Not considered a genotoxic hazard. Negative in gene mutation assays *in vitro*, in *in vivo/in vitro* UDS assays and in *in vivo* micronucleus assays in mice. Positive in an *in vitro* chromosome aberration assay in the presence of S-9 but not observed in the *in vivo* assay.

For a summary of the potential for adverse health effects from exposure to this product, refer to Section 2. For information regarding regulations pertaining to this product, refer to Section 15.

12. ECOLOGICAL INFORMATION

AVIAN TOXICITY: Based upon EPA designation, Metconazole Fungicide Technical is practically non-toxic to mallard ducks and slightly toxic to bobwhite quail. Test results include:

Oral LD₅₀ bobwhite quail: 875 mg/kg
 Dietary LC₅₀ bobwhite quail: 1,057 mg/kg
 Dietary LC₅₀ mallard duck: > 5,200 mg/kg

AQUATIC ORGANISM TOXICITY: Based upon EPA designation, Metconazole Fungicide Technical is moderately toxic to fish and freshwater invertebrates and highly toxic to marine invertebrates. Test results include:

LC₅₀ (96 hr) Fathead Minnow: 6.3 mg/L
 LC₅₀ (96 hr) Rainbow Trout: 2.2 mg/L
 LC₅₀ (96 hr) Sheepshead Minnow: 3.9 mg/L
 LC₅₀ (48 hr) Daphnia magna: 4.2 mg/L
 LC₅₀ (96 hr) Mysid Shrimp: 0.75 mg/L
 EC₅₀ (96 hr) Oyster Shell Deposition: 2.3 mg/L
 EC₅₀ (72 hr) Green Algae: 1.7 mg/L
 EC₅₀ (96 hr) Blue-green Algae: > 13 mg/L
 EC₅₀ (96 hr) Fresh Water Diatom: 0.0098 mg/L
 EC₅₀ (96 hr) Marine Diatom: 1.7 mg/L
 EC₅₀ (7 day) Duckweed: > 0.17 mg/L

OTHER NON-TARGET ORGANISM TOXICITY: The contact LD₅₀ (96 hr) of Metconazole Fungicide Technical to the honeybee is >90 µg/bee.

Not hazardous to arthropods (honey bee, etc.) or earthworms. Metconazole Fungicide Technical has a photodegradation half-life in water of 144 - 190 days and a soil photodegradation half-life of 65 days (for light-dark cycle: 12 hours)

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

DISPOSAL METHODS: Check government regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.

14. TRANSPORT INFORMATION

UN/NA NUMBER:	Not applicable
DOT (ground) SHIPPING NAME:	Pesticide, Liquid, Non-regulated
TECHNICAL NAME (hazardous material):	Not applicable
HAZARD CLASS:	Not applicable
PACKING GROUP:	Not applicable
DOT REPORTABLE QUANTITY (RQ):	Not applicable
REMARKS:	None
EXEMPTION REQUIREMENT:	None
EMERGENCY RESPONSE GUIDEBOOK NO.:	Not applicable
MARINE POLLUTANT:	Not applicable

15. REGULATORY INFORMATION

PESTICIDE REGULATIONS: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

U.S. FEDERAL REGULATIONS:

Ingredients in this product are reviewed against an inclusive list of federal regulations. Therefore, the user should consult appropriate authorities. The federal regulations reviewed include: Clean Water Act, SARA, CERCLA, RCRA, DOT, TSCA and OSHA. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

Glycerine

TSCA Inventory List -

Listed

SARA (311, 312):

Immediate Health:	Yes
Chronic Health:	Yes
Fire:	No
Sudden Pressure:	No
Reactivity:	No

STATE REGULATIONS:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities. The state regulations reviewed include: California Proposition 65, California Directors List of Hazardous Substances, Massachusetts Right to Know, Michigan Critical Materials List, New Jersey Right to Know, Pennsylvania Right to Know, Rhode Island Right to Know and the Minnesota Hazardous Substance list. For Washington State Right to Know, see Section 8 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

Glycerine

MA Right To Know	Listed
PA Right To Know	Listed
RI Right To Know	Listed
MN Hazardous Substance	Listed

Metconazole (5-[(4-chlorophenyl)methyl]-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol)

NJ Right To Know	Listed
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For information regarding potential adverse health effects from exposure to this product, refer to Sections 2 and 11.

16. OTHER INFORMATION

REASON FOR ISSUE:	Newly registered product; Updated product name. Added the EPA registration number.
MSDS NO.:	0372
EPA REGISTRATION NUMBER:	59639-171
REVISION NUMBER:	3
REVISION DATE:	04/08/2011
SUPERCEDES DATE:	January 27, 2010
RESPONSIBLE PERSON(S):	Valent U.S.A. Corporation, Corporate EH&S, (925) 256-2803

Emergency Telephone:	(800) 892-0099
REVISION NUMBER:	3

MSDS NO.:	0372
REVISION DATE:	04/08/2011

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products is regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling. All necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

The information in this MSDS is based on data available to us as of the revision date given herein, and believed to be correct. Contact Valent U.S.A. Corporation to confirm if you have the most current MSDS.

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