



Safety Data Sheet

Quash® Fungicide

1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: Quash® Fungicide
EPA REGISTRATION NUMBER: 59639-147
VC NUMBER(S): 1585
PRODUCT DESCRIPTION: Fungicide
Quash is a registered 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

The current SDS is available through our website (www.valent.com), or by calling the product information numbers listed above.

2. HAZARDS IDENTIFICATION

For EPA FIFRA-specific information see Section 15

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Label elements

EMERGENCY OVERVIEW

Precautionary Statements - Prevention

Read product label prior to using this product. For specific handling instruction refer to Section 7, Handling and Storage

Precautionary Statements - Response

See Section 4, First Aid Measures

Emergency Telephone: (800) 892-0099
REVISION NUMBER: 1

SDS NO.: 0377
REVISION DATE: 04/13/2015

Precautionary Statements - Storage

For information on Storage and Handling see Section 7.

Precautionary Statements - Disposal

For further information on product and container disposal see Section 13.

Hazards not otherwise classified (HNOC)

Other Information

- Toxic to aquatic life
 - Toxic to aquatic life with long lasting effects
- 25% of the mixture consists of ingredient(s) of unknown toxicity

For information on Transportation requirements see Section 14.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight/ Percent	TRADE SECRET
Metconazole	125116-23-6	48.5 - 51.5	
Others	Various CAS#s	48.5-51.5	

Other ingredients, which may be 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, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN:

None

5. FIRE FIGHTING MEASURES

Flash point °F	Not applicable
AUTOIGNITION:	No data available
EXTINGUISHING MEDIA:	Water fog, carbon dioxide, foam, dry chemical
FLAMMABLE LIMITS IN AIR - LOWER (%):	Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	Not applicable

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: Oxides of sodium, sulfur and phosphorus

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: Reduce airborne dust. Avoid runoff into storm sewers or other bodies of water.

CLEANUP: Clean up spill immediately. Vacuum or sweep up material and 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 or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

CLEANUP: Clean up spill immediately. Absorb spill with inert material. 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. 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. Not for use or storage in or around the home. Keep container closed when not in use.

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 ventilation is not adequate to keep airborne concentrations below recommended exposure standards, approved respiratory protection should be worn.

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

EXPOSURE LIMITS

Chemical Name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Metconazole	None	None	None
Others	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	Odor	No information available
Appearance	Granules	Odor threshold	No information available
Color	Dark brown		

<u>PROPERTIES</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8 - 9 @ 25° C	1% (w/v) suspension in water
Melting point/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	Not applicable	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limits	Not applicable	
Lower flammability limit	Not applicable	
Vapor pressure	No information available	

Vapor density	No information available
Specific Gravity	No information available
Water solubility	Dispersible in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Density	No information available
Bulk density	32 - 33 lb/ft ³

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Oxidizing materials and acids.

Hazardous Decomposition Products

Oxides of sodium, sulfur and phosphorus.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral Toxicity LD ₅₀ (rats)	= 1,750 mg/kg	EPA Tox Category	III
Dermal Toxicity LD ₅₀ (rabbits)	> 5,000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC ₅₀ (rats)	> 2.27 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Moderately irritating	EPA Tox Category	III
Skin Irritation (rabbits)	Brief and/or minor irritation	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer	EPA Tox Category	Not applicable

CARCINOGEN CLASSIFICATION

Chemical Name	IARC	OSHA - Select Carcinogens	NTP Carcinogen List
Metconazole	Not listed	Not listed	Not listed
Others	Not listed	Not listed	Not listed

TOXICITY OF METCONAZOLE TECHNICAL

SUBCHRONIC: Subchronic (28 to 90 days) studies of Metconazole Fungicide Technical in rodents and dogs reported decreased body weights, fatty vacuolation and hypertrophy of the liver, reduced RBC parameters, increased serum liver enzyme levels, and increased spleen and liver weights. There is no evidence for neurotoxicity or immunotoxicity following treatment with Metconazole Fungicide Technical. The lowest no-observable-effect level (NOEL) was 2.5 mg/kg/day.

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: Test results for Metconazole technical on avian species 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: Test results for Metconazole technical on aquatic species 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: 0.053 mg/L
EC₅₀ (72 hr) Green Algae: 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.

OTHER ENVIRONMENTAL INFORMATION:

This pesticide is toxic to shrimp. Do not apply directly to water, to areas where surface water is present or to intertidal areas below mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. See Directions for Use on product label for additional precautions and restrictions. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas.

13. DISPOSAL CONSIDERATIONS**END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.**

PRODUCT DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure 2 more times.

DISPOSAL METHODS: Check government regulations and local authorities for approved disposal of this material. Dispose of in accordance with applicable laws and regulations. Do not contaminate water, food or feed by disposal. Disposal of waste and used containers must be in accordance with applicable Federal, State and local regulations. Do not flush to surface water or sanitary sewer system.

14. TRANSPORTATION INFORMATION

DOT (ground) SHIPPING NAME: Not regulated for domestic ground transport by U.S. DOT

EMERGENCY RESPONSE

GUIDEBOOK NO.: Not applicable

ICAO/IATA SHIPPING NAME: UN 3077 Environmentally Hazardous Substance, Solid, N.O.S. (Metconazole), 9, III, Marine Pollutant

REMARKS: Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations -- see UN Special Provision 375.
For U.S. Shipping, Emergency Response Guidebook No. 171

IMDG SHIPPING NAME: UN 3077 Environmentally Hazardous Substance, Solid, N.O.S. (Metconazole), 9, III, Marine Pollutant

EMS NO.: F-A, S-F

15. REGULATORY INFORMATION**EPA-FIFRA LABEL INFORMATION THAT DIFFERS FROM OSHA-GHS REQUIREMENTS:**

This material is a pesticide product registered by the EPA under FIFRA and is subject to certain labeling requirements under federal pesticide law. These requirements may differ from the classification criteria and hazard information required by OSHA GHS for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the FIFRA pesticide label:

EPA FIFRA SIGNAL WORD: CAUTION

- **Harmful if swallowed**
- **Causes moderate eye irritation**
- **Avoid contact with eyes, skin and clothing**
- **Keep out of reach of children.**

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.

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.

For information regarding potential adverse health effects from exposure to this product, refer to Sections 2 and 11.

16. OTHER INFORMATION

REASON FOR ISSUE:	Updated information to meet OSHA Hazcom 2012 (GHS) regulations.
SDS NO.:	0377
EPA REGISTRATION NUMBER:	59639-147
REVISION NUMBER:	1
REVISION DATE:	04/13/2015
SUPERCEDES DATE:	None
RESPONSIBLE PERSON(S):	Valent U.S.A. Corporation, Corporate EH&S, (925) 256-2803

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS 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 SDS 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 SDS.

Judgments as to the suitability of information herein for the individual's own use or purposes are necessarily the individual's own responsibility. Although reasonable care has been taken in the preparation of such information, Valent extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the individual's purposes or the consequences of its use.

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