



Safety Data Sheet

Quash® Fungicide

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Quash® Fungicide
PCPA REGISTRATION NUMBER: 30402
VC NUMBER(S): 1585
PRODUCT DESCRIPTION: Fungicide
Quash is a registered trademark of Valent U.S.A. Corporation

MANUFACTURER/DISTRIBUTOR
VALENT CANADA, INC.
3-728 Victoria Road South
Guelph, Ontario N1L 1C6

EMERGENCY TELEPHONE NUMBERS
HEALTH EMERGENCY OR SPILL (24 hr):
(800) 682-5368
TRANSPORTATION (24 hr.): CHEMTREC
(800) 424-9300 or (202) 483-7616

Product Information
AGRICULTURAL PRODUCTS: (800) 682-5368

The current MSDS is available through our website (www.valent.ca) or by calling the product information number(s) listed above.

2. HAZARDS IDENTIFICATION

Emergency Overview

- Caution**
- Harmful if swallowed
 - Causes moderate eye irritation.
 - Avoid contact with eyes, skin and clothing
 - Avoid breathing mist or vapours
 - 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 may cause minor skin irritation and / or short term. If exposed, the expected adverse health effects may include irritation and possibly a slight inflammation. This product is minimally 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 minimally toxic when inhaled. Exposure to high concentrations in the air may result in respiratory irritation. Signs and symptoms may include, but not be limited to, nasal discharge, sore throat, coughing and difficulty in breathing.

Emergency Telephone: (800) 682-5368
REVISION NUMBER: 6

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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.

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	125116-23-6	30 - 60	Active ingredient
Others	Various CAS#s	30 - 60	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 identity is 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) 682-5368** at any time.

4. FIRST AID MEASURES

EMERGENCY NUMBER (800) 682-5368

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-682-5368** 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 centre 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 centre or doctor for treatment advice.

Ingestion:

Call a poison control centre or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control centre 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 centre or doctor for further treatment advice.

Notes to physician:

None

5. FIRE FIGHTING MEASURES

FLASH POINT: 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) 682-5368
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. Users should wash hands thoroughly with soap and water 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. Do not use a knife or other sharp object to open the outer bag.

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, out of direct sunlight. Not for use or storage in or around the home. Protect against moisture.

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. Unless ventilation is 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.

ENGINEERING CONTROLS: Showers. Eyewash stations. Use in a well ventilated area.

Exposure limits

Chemical Name	Canadian OELs
Metconazole	none
Others	none

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:	Granule
COLOUR:	Dark brown
ODOUR:	No Data Available
FLASH POINT:	Not applicable
BULK DENSITY:	32 - 33 lb/ft ³
pH:	8 - 9 @ 25° C (1% w/v in water)
SOLUBILITY:	Dispersible in water

10. STABILITY AND REACTIVITY

Chemical stability: Stable at normal ambient temperatures.
Incompatibility: Strong acids and oxidizing agents.

Oxidation/Reduction properties: No chemical incompatibility in contact with water, monoammonium phosphate, zinc, and potassium permanganate.

Explodability: Not expected to be explosive

Hazardous decomposition products: Oxides of sodium, sulfur and phosphorus

Conditions to avoid: High heat and humidity

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 - Group 1 (carcinogenic to humans)	IARC - Group 2A (Probably carcinogenic)	IARC - Group 2B (Possibly carcinogenic)	NTP Carcinogen List
Metconazole	No	No	no	Not listed
Others	No	No	No	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: 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 V-10116 Technical to the honeybee is >90 µg/bee.

13. DISPOSAL CONSIDERATIONS

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

CONTAINER DISPOSAL: Dispose of the container in accordance with provincial requirements. Do not reuse this container. Triple rinse container (or equivalent) promptly after emptying. Offer for recycling, if available. Make the container unsuitable for further use.

Disposal methods: Check government regulations and local authorities for approved disposal of this material. Dispose 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 US DOT or Canada TDG.
Emergency Response Guidebook No.: Not applicable

ICAO/IATA proper shipping name:	UN 3077 Environmentally Hazardous Substance, Solid, N.O.S. (Metconazole), 9, III, Marine Pollutant
Remarks:	<ul style="list-style-type: none"> •Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations – see IATA Special Provision A197 •For US shipping, Emergency Response Guidebook No. 171
IMDG proper shipping name:	UN 3077 Environmentally Hazardous Substance, Solid, N.O.S. (Metconazole), 9, III, Marine Pollutant
Remarks:	<ul style="list-style-type: none"> •Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations – see IMDG 2.10.2.7 •For US shipping, Emergency Response Guidebook No. 171
EMS No.:	F-A, S-F

15. REGULATORY INFORMATION

CANADIAN REGULATIONS:

WHMIS Hazard Class: This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations (CPR)* and the SDS contains all information required by the CPR.

Others

Canada NDSL Inventory List - Not listed/Not Determined

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

PESTICIDE REGULATIONS: All pesticides are governed under PCPA (Pest Control Products 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.

PROVINCIAL REGULATIONS: This product did not trigger any provincial regulations.

16. OTHER INFORMATION

REASON FOR ISSUE:	Review and update SDS. Updated trademark status. Minor edits throughout for clarity.
SDS NO.:	CAN-0377
PCPA REGISTRATION NUMBER:	30402
REVISION NUMBER:	6
REVISION DATE:	05/14/2015
SUPERCEDES DATE:	November 3, 2009
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 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 are regulated by the PMRA under the authority of the Pest Control Products Act through the product labeling. All necessary and appropriate precautionary, use, storage and disposal information is set forth on the labeling. It is a violation of Federal law to use a pesticide product in a manner not prescribed on the PMRA-accepted label.

Emergency Telephone: (800) 682-5368
REVISION NUMBER: 6

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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.

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