

TetraSan™ 5 WDG

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.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TetraSan™ 5 WDG

VC NUMBER(S): VC-1241, VC-1272

EPA REGISTRATION NUMBER: Not registered

SYNONYM(S):

S-1283 5 WDG

V-1283 5 WDG

MANUFACTURER

VALENT USA CORPORATION

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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) 6VALENT

PROFESSIONAL PRODUCTS: (800) 89VALENT

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name (CAS #) [Chemical Name]	Weight Percent	Exposure Limit	Ref.
Etozazole* (153233-91-1) [2-(2,6-difluorophenyl)- 4-[4-(1,1-dimethylethyl)- 2-ethoxyphenyl]-4,5- dihydrooxazole]	4.75 - 5.25	None	—
Kaolin (1332-58-7)	< 40	10 mg/m3 total dust, 5 mg/m3 respirable dust	OSHA
		2 mg/m3 respirable fraction	ACGIH
Other**	40 - 96	None	—

* Active Ingredient

** 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 1-800-892-0099 at any time.

SECTION 3: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****CAUTION:**

— FOR RESEARCH AND DEVELOPMENT PURPOSES ONLY

— TO BE USED ONLY UNDER THE DIRECT SUPERVISION OF A TECHNICALLY QUALIFIED INDIVIDUAL

— AVOID CONTACT WITH EYES, SKIN OR CLOTHING

— AVOID BREATHING DUST OR SPRAY MIST

— KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS**Acute Toxicity (Primary Routes of Exposure)**

Signs and Symptoms of Systemic Effects: Exposure to lethal or near-lethal levels of this compound may cause the following systemic toxic effects: loss of balance, labored breathing, excessive salivation, tearing, diarrhea, anorexia and weight loss.

Eye: This product is expected to cause brief and/or minor eye irritation. The degree of injury will depend on the amount and duration of contact and the speed and thoroughness of the first aid treatment. The expected adverse health effects resulting from an exposure may include redness and possible swelling.

Skin: This product is expected to cause brief and/or minor irritation. The degree of injury will depend on the amount and duration of contact and the speed and thoroughness of the first aid treatment. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling.

This product is not expected to cause allergic skin reactions.

This product has been shown to be minimally toxic when absorbed through the skin. The degree of injury will depend on the amount of material inhaled and the speed and thoroughness of the first aid treatment. The expected adverse systemic health effects are described above.

Ingestion: This product has been shown to be slightly toxic when ingested. The degree of injury will depend on the amount of material ingested and the speed and thoroughness of the first aid treatment. The expected adverse systemic health effects are described above.

Inhalation: Exposure to high concentrations of dust may result in respiratory irritation. Signs and symptoms may include, but not be limited to, nasal discharge, sore throat, coughing and difficulty in breathing.

This product has been shown to be minimally toxic when inhaled. The degree of injury will depend on the amount of material inhaled and the speed and thoroughness of the first aid treatment. The expected adverse systemic health effects are described above.

Chronic Toxicity (Including Cancer): Repeated high doses of Etozazole Technical in laboratory animals produced increased liver weights, changes in the testis, and tumors in the testis and pancreas.

Teratology (Birth Defects) Information: Slight developmental effects were produced in animals exposed to Etozazole Technical at maternally toxic dose levels.

Reproduction Information: Based on the results of animal studies, Etozazole Technical is not expected to cause any adverse reproductive effects.

Potentially Aggravated Condition: Individuals with preexisting diseases of the liver 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 Regulatory Information, refer to Section 15.

SECTION 4: FIRST AID MEASURES**EMERGENCY NUMBER (800) 892-0099**

EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Remove contact lenses if worn. Get medical attention.

SKIN: Wash with soap and water. Remove and wash contaminated clothing separately. Get medical attention if irritation persists.

INGESTION: If swallowed, drink 1 or 2 glasses of water (or milk) and induce vomiting by touching the back of the throat with finger. If possible, contact a physician or Poison Control Center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest emergency treatment center.

INHALATION: If inhaled, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

NOTES TO PHYSICIAN: None

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: NA

METHOD: NA

AUTOIGNITION: NA

EXTINGUISHING MEDIA: CO₂, dry chemical, foam, water fog.

FLAMMABLE LIMITS (% by volume in air):

Lower: NA

Upper: NA

NFPA RATINGS: Health 2; Flammability 1; Reactivity 0; Special None

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using professional judgment. 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 product 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. Read the entire document.

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce oxides of nitrogen. Combustion may produce toxic compounds of fluorine. Incomplete combustion can produce carbon monoxide.

SECTION 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 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 disposable container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a disposable 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. Notify and consult with appropriate regulatory authorities.

CLEANUP: Clean up spill immediately. Absorb spill with inert material. Vacuum or sweep up and place in a disposable container. For further information, call 1-800-829-0099.

SECTION 7: HANDLING AND STORAGE

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

Keep pesticide in original container. Do not store or transport near food or feed. Store in a cool, dry place, out of direct sunlight. Do not contaminate food or feed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

EYE PROTECTION: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

RESPIRATION/VENTILATION: If operating conditions result in airborne concentrations of this material, the use of an approved respirator is recommended. Use adequate ventilation to keep the airborne concentration of this material below the recommended exposure standards.

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Brown granules

ODOR: NDA

MELTING POINT: NDA

DENSITY/BULK DENSITY: 548.6 g/l, 34.2 lbs./cu ft

SOLUBILITY: Dispersible in water

pH: 5.94

CORROSION CHARACTERISTICS: NDA

SECTION 10: STABILITY AND REACTIVITY**CHEMICAL STABILITY:** Stable**OXIDATION/REDUCTION PROPERTIES:** No reaction with water, monoammoniumphosphate, zinc or 1% potassium permanganate.**SECTION 11: TOXICOLOGICAL INFORMATION****ACUTE** (Product Specific Information):**Eye Irritation:** Corneal involvement or irritation in the rabbit clearing in 3 days or less. (Toxicity Category III)**Skin Irritation:** Mild to slight irritation in the rabbit at 72 hours. (No irritation or slight erythema.) (Toxicity Category IV)**Dermal Toxicity:** The dermal LD₅₀ in rats is > 5 g/kg. (Toxicity Category IV)**Oral Toxicity:** The oral LD₅₀ in male rats is 4.5 g/kg and in female rats is 2.6 g/kg. The combined LD₅₀ for both sexes is 4.3 g/kg. (Toxicity Category III)**Inhalation Toxicity:** The 4-hour nose-only LC₅₀ in rats is > 2.05 mg/L. (Toxicity Category IV)**Skin Sensitization:** This product did not produce a skin sensitization reaction in the Guinea Pig (Buehler method).**TOXICITY OF ETOXAZOLE TECHNICAL:****SUBCHRONIC:** Compound-related effects observed in rodent studies, at high dietary dose levels of Etoxazole Technical, included increased liver weight, histological changes in the liver, and slight changes in hematology and blood biochemistry parameters. The NOELs in rats and mice were 100 and 400 ppm, respectively.

In a 13-week feeding study in dogs with Etoxazole Technical, dose-related effects noted at the top two levels (10000 and 2000 ppm) included increased liver weights, decreased prostate weights, histological changes of the liver and prostate (acinar cell atrophy), and changes in blood biochemistry (high dose only). The NOEL for this study was 200 ppm.

In a 28-day dermal toxicity study, no adverse effects were observed at doses of Etoxazole Technical up to 1000 mg/kg/day.

CHRONIC/CARCINOGENICITY: A 24-month chronic/oncogenicity study was conducted in rats with Etoxazole Technical in the diet at dose levels of 0, 4, 16 and 64 mg/kg/day. Increases in liver weights in males, tubular atrophy of the testis, testicular interstitial cell (Leydig cell) tumors, and pancreatic adenomas were observed in this study. Similar histopathological effects were not observed at the 12-month interim necropsy in a study conducted at 50, 5,000 and 10,000 ppm.

An 18-month oncogenicity study was conducted in mice with Etoxazole Technical in the diet at dose levels of 0, 15, 60 and 240 mg/kg/day. Minimal decreases in body weights were observed at 240 mg/kg/day. No other indications treatment-related effects were observed.

In a one year study in dogs with Etoxazole Technical, an increase in absolute and relative liver weights was observed with corresponding histopathological changes in the liver at 1000 and 5000 ppm. The NOEL for this study was 200 ppm.

TERATOLOGY/DEVELOPMENTAL TOXICITY: No developmental toxicity was observed in rats even at maternally toxic levels of Etoxazole Technical. Based on decreased food consumption at the 1000 mg/kg/day level, the maternal NOEL was 200 mg/kg/day and the developmental NOEL was 1000 mg/kg/day.

In rabbits, Etoxazole Technical produced a slight increase in skeletal variations, but only at the maternally toxic level of 1000 mg/kg/day (based on decreased body weight gain, reduced food consumption and enlarged liver). The maternal and developmental NOELs were both 200 mg/kg/day.

REPRODUCTION: In a two-generation rat reproductive study with Etoxazole Technical, an increase in relative liver weight was observed in the F0 and F1 males in the 2000 ppm group. At the 2000 ppm level, the viability index on lactation day 4 was reduced in F1 pups. Body weights of this group were also reduced in F1 and F2 pups during the latter half of the lactation period. The NOEL for both adults and offspring was 400 ppm.**MUTAGENICITY:** Etoxazole Technical was negative in the Microbial/Microsome Reverse Mutation Assay(Ames Test), *in vivo* mouse micronucleus assay, Un-scheduled DNA Synthesis and the *in vitro* chromosome aberration test in Chinese hamster lung cells. A positive response was observed in the mammalian mutation assay using L5178Y mouse lymphoma cells. For a summary of the potential for adverse health effects from exposure to this product, refer to Section 3. For information regarding regulations pertaining to this product, refer to Section 15.**SECTION 12: ECOLOGICAL INFORMATION****AVIAN TOXICITY:** Etoxazole Technical is considered to be practically nontoxic to birds based on results of test in the following species:Mallard duck oral LD₅₀: greater than 2000 mg/kgBobwhite quail dietary LC₅₀: greater than 5200 ppm

No reproductive effects were observed in bobwhite quail exposed to 1000 ppm of Etoxazole Technical, the highest dose tested.

AQUATIC ORGANISM TOXICITY: This product is moderately to highly toxic to fish and very highly toxic to aquatic invertebrates. Tests with Etoxazole Technical have been conducted in the following species:96-Hour LC₅₀ rainbow trout: 2.8 mg/l96-Hour LC₅₀ bluegill sunfish: 1.4 mg/l96-Hour LC₅₀ Japanese carp: 0.89 mg/l48-Hour EC₅₀ *Daphnia magna*: 7.1 ug/l

Early life-stage rainbow trout: MATC < 0.033 mg/l and > 0.015 mg/l

Life-cycle *Daphnia magna*: MATC* < 0.48 ug/l and > 0.20 ug/l

*MATC - Maximum Acceptable Toxicant Concentration

OTHER NON-TARGET ORGANISM TOXICITY: Etoxazole Technical is practically nontoxic to adult worker honey bees. The 48-hour LD₅₀ values were: Oral LD₅₀ > 200 ug/bee and Contact LD₅₀ > 200 ug/bee.**SECTION 13: DISPOSAL CONSIDERATIONS****END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.****DISPOSAL METHODS:** Check governmental regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.**SECTION 14: TRANSPORT INFORMATION****D.O.T. SHIPPING NAME:** Pesticides, dry, non-regulated**TECHNICAL SHIPPING NAME:** Etoxazole, 5% Granules**RQ:** None**D.O.T. HAZARD CLASS:** NA**U.N./N.A. NUMBER:** NA**REMARKS:** None**EXEMPTION REQUIREMENT:** NA**SECTION 15: REGULATORY INFORMATION****REGULATIONS UNDER FIFRA:** 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.**OTHER U.S. FEDERAL REGULATIONS:****OSHA:** See Section 2**CERCLA RQ*:** None**RCRA**:** None**SARA TITLE III:****Sara (313) Chemicals:** None**Sara (311,312):**

Immediate Health Effects: Yes

Chronic Health Effects: Yes

Fire Hazard: No

Sudden Release of Pressure: No

Reactivity Hazard: No

Sara Section 302: None

This product is not listed as a carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

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.

* RQ: Reportable Quantity

** RCRA waste codes must be determined on a case-by-case basis (i.e., spill, processing waste, etc.).

For information regarding potential adverse health effects from exposure to this product, refer to Sections 3 and 11.

SECTION 16: OTHER INFORMATION**REASON FOR ISSUE:** Revisions throughout MSDS**REVISION NUMBER:** 1**REVISION DATE:** 02-28-2000**SUPERSEDES DATE:** 05-03-1999**MSDS NUMBER:** 0200

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 USA CORPORATION TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS.

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EMERGENCY TELEPHONE #: 800-892-0099

NDA - No Data Available

NA - Not Applicable

MSDS Number: 0200**Revision Number:** 1**Revision Date:** 02-28-2000