

# MATERIAL SAFETY DATA SHEET

Tenkoz Inc.

Emergency Phone: 800-424-9300  
Tenkoz Inc.  
Alpharetta, GA 30005

## VOLLEY\* ATZ CORN HERBICIDE

Effective Date: 09-Jul-10

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Volley\* ATZ Corn Herbicide

#### COMPANY IDENTIFICATION:

Tenkoz Inc.  
1725 Windward Concourse  
Alpharetta, GA 30005

### 2. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Tan colored opaque liquid with a faint aromatic odor. May cause eye irritation and/or corneal injury. May cause skin irritation. Toxic to aquatic organisms and wildlife.

**EMERGENCY TELEPHONE NUMBER:** 800-424-9300

### 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Acetochlor	CAS # 034256-82-1	32.6%
Atrazine	CAS # 001912-24-9	24.2%
Dichlormid	CAS # 037764-25-3	5.6%
Balance, Total, Including Propylene Glycol	CAS # 000057-55-6	43.0%

### 4. FIRST AID:

**EYE:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**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. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

**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. Never give anything by mouth to an unconscious person.

**INHALATION:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, and then give artificial respiration; if by mouth to mouth use rescuer (pocket mask, etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** >212°F (>100°C)

**METHOD USED:** TCC

**EXTINGUISHING MEDIA:** Water fog, alcohol foam, carbon dioxide, dry chemical or halogenated agents.

**FIRE AND EXPLOSION HAZARDS:** If heated above the flash point, vapors can flow along surfaces to distant ignition sources and flash back.

**FIRE-FIGHTING EQUIPMENT:** A self-contained breathing apparatus and full-face piece and protective clothing must be worn in fire conditions.

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS/LEAKS:** Absorb small spills with materials such as sand, sawdust, Zorball, or dirt and shovel into an open drum. Wash exposed body areas thoroughly after handling. Report large spills to Dow AgroSciences at 800-992-5994.

### 7. HANDLING AND STORAGE:

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Avoid contact with eyes. Keep away from food, drink and animal feeding stuffs. Exercise due caution to prevent damage to or leakage of the container. Keep container tightly closed and store in a cool, well-ventilated area.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

#### EXPOSURE GUIDELINES:

Acetochlor: Dow AgroSciences Industrial Hygiene Guide is 0.1 mg/M<sup>3</sup>.

Atrazine: ACGIH TLV is 5 mg/M<sup>3</sup>, A4.

Propylene glycol: AIHA WEEL is 10 mg/M<sup>3</sup> for total vapor and aerosol.

**ENGINEERING CONTROLS:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

#### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

**EYE/FACE PROTECTION:** Use chemical glasses.

**SKIN PROTECTION:** Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guideline.

**APPLICATORS AND ALL OTHER HANDLERS:** Refer to the product label for personal protective clothing and equipment.

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**BOILING POINT:** Not determined

**SPECIFIC GRAVITY:** 1.114 g/mL

**DENSITY @ 68°F (20°C):** 9.28 lbs/gal\*

**SOLUBILITY IN WATER:** Not determined

**APPEARANCE:** Tan colored opaque liquid

**ODOR:** Faint aromatic

**pH:** Not determined

\*Varies with temperature

### 10. STABILITY AND REACTIVITY:

**STABILITY: (CONDITIONS TO AVOID)** Stable under normal storage conditions.

**INCOMPATIBILITY:** Oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** If product is involved in a fire, carbon dioxide, carbon monoxide, hydrogen chloride, nitrogen dioxide, and sulfur dioxide may be formed.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

### 11. TOXICOLOGICAL INFORMATION:

**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

**EYE:** May cause moderate eye irritation. May cause slight corneal injury.

**SKIN:** Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption in rats is >5,000 mg/kg. Has caused allergic skin reactions when tested in guinea pigs.

**INGESTION:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause central nervous system effects. The oral LD<sub>50</sub> for rats is >5,000 mg/kg (males) and 2,242 mg/kg (females).

**INHALATION:** Prolonged exposure is not expected to cause adverse effects. The aerosol LC<sub>50</sub> for rats is >6.23 mg/L for 4 hours.

#### SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Acetochlor, in animals, has been reported to cause effects on the following organs: blood, central nervous system, kidney, liver, testes, and eyes. Atrazine, in animals, has been reported to cause effects on the following organ: heart. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects. Dichlormid, in animals, has been reported to cause effects on the following organs: liver, muscles and respiratory tract.

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**CANCER INFORMATION:** Acetochlor and atrazine have caused cancer in some laboratory animals. Dichlormid did not cause cancer in laboratory animals.

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**TERATOLOGY (BIRTH DEFECTS):** Acetochlor, atrazine, and dichlormid did not cause birth defects in animals; other fetal effects occurred only as doses toxic to the mother. Propylene glycol did not cause birth defects or any other fetal effects in laboratory animals.

**REPRODUCTIVE EFFECTS:** In laboratory animal studies on Acetochlor, effects on reproduction were seen only at doses that produced significant toxicity to the parent animals. Atrazine, dichlormid, and propylene glycol did not interfere with reproduction in animal studies.

**MUTAGENICITY:** For acetochlor, in-vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative. For atrazine, animal genetic toxicity studies were negative in some cases and positive in other cases. For atrazine, dichlormid and propylene glycol, in-vitro genetic toxicity studies were negative. For propylene glycol, animal genetic toxicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL FATE:

#### MOVEMENT & PARTITIONING:

Based largely or completely on information for acetochlor.  
Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log  $P_{ow}$  between 3 and 5).  
Potential for mobility in soil is medium (Koc is between 150 and 500).

Based largely or completely on information for atrazine and dichlormid.

Bioconcentration potential is low (BCF is <100 or Log  $P_{ow}$  <3).  
Potential for mobility in soil is medium (Koc is between 150 and 500).

#### DEGRADATION & PERSISTENCE:

Based largely or completely on information for dichlormid.  
Degradation is expected in the atmospheric environment within minutes to hours.

#### ECOTOXICOLOGY:

Based largely or completely on information for acetochlor.  
Material is highly toxic to aquatic organisms on an acute basis ( $LC_{50}$  or  $EC_{50}$  is between 0.1 and 1 mg/L in the most sensitive species tested).

Material is slightly toxic to birds on an acute basis ( $LD_{50}$  is between 501 and 2000 mg/kg).

Material is practically non-toxic to birds on a dietary basis ( $LC_{50}$  is >5000 ppm).

Based largely or completely on information for atrazine.

Material is moderately toxic to aquatic organisms on an acute basis ( $LC_{50}$  or  $EC_{50}$  is between 1 and 10 mg/L in the most sensitive species tested).

Based largely or completely on information for dichlormid.

Material is practically non-toxic to aquatic organisms on an acute basis  $LC_{50}$  or  $EC_{50}$  is >100 mg/L in the most sensitive species tested).

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

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### 14. TRANSPORT INFORMATION:

**DOT Non-Bulk**  
NOT REGULATED

**DOT Bulk**  
NOT REGULATED

#### IMDG

**Proper Shipping Name:** ENVIRONMENTALLY  
HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** ACETOCHLOR

**Hazard Class:** 9 **ID Number:** UN3082

**Packing Group:** PG III

**EMS Number:** f-a, s-f

**Marine pollutant:** Yes

#### ICAO/IATA

**Proper Shipping Name:** ENVIRONMENTALLY  
HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** ACETOCHLOR

**Hazard Class:** 9 **ID Number:** UN3082

**Packing Group:** PG III

**Cargo Packing Instruction:** 914

**Passenger Packing Instruction:** 914

#### Additional Information

MARINE POLLUTANT

### 15. REGULATORY INFORMATION:

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

#### U.S. REGULATIONS

**SARA 313 INFORMATION:** This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Atrazine	001912-24-9	24.2%

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard

A delayed health hazard

**CALIFORNIA PROPOSITION 65:** The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains a chemical(s) known to the State of California to cause cancer. During processing of our product, exposure may exceed the levels deemed to represent significant risk as defined by the emergency guidelines in 22 California Code of Regulations, Division 2, Chapter 3, Article 7.

**WARNING:** This product contains a chemical (Acetochlor), known to the State of California to cause cancer.

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**STATE RIGHT-TO-KNOW:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
Propylene Glycol	000057-55-6	PA1
Atrazine	001912-24-9	NJ1 NJ3 NJ2 PA1

NJ1=New Jersey Special Health Hazard Substance (present at greater than or equal to 0.1%).

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

**OSHA HAZARD COMMUNICATION STANDARD:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)  
RATINGS:**

Health 2  
Flammability 1  
Reactivity 0

**COMPREHENSIVE ENVIRONMENTAL RESPONSE  
COMPENSATION AND LIABILITY ACT (CERCLA, or  
SUPERFUND):** To the best of our knowledge, this product  
contains no chemical subject to reporting under CERCLA.

**16. OTHER INFORMATION:**

**MSDS STATUS:** Revised Sections: 14  
Reference: DR-0390-5826  
Replaces MSDS Dated: 24-Jun-09

The Information Herein Is Given In Good Faith, But No  
Warranty, Express or Implied, Is Made. Consult Dow  
AgroSciences for Further Information.