

# MATERIAL SAFETY DATA SHEET

## TENKOZ ATRAZINE 4L HERBICIDE

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Tenkoz Inc.

### 1. IDENTIFICATION

Product name: **TENKOZ ATRAZINE 4L HERBICIDE**  
 EPA Reg. No. 55467-13  
 Chemical name of active ingredient(s): Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine  
 Manufacturer/Registrant: Tenkoz, Inc.  
 100 North Point Center East, Suite 330  
 Alpharetta, GA 30022  
 Phone: 770-343-8509  
 For fire, spill, and/or leak emergencies, contact  
 CHEMTREC: Phone: 1-800-424-9300

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	%	CAS NO.	OSHA/ PEL	ACGIH/TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Atrazine	42.9	1912-24-9	Not Established	5 mg/m3 (TWA)	5 mg/m3** (TWA)	IARC3

\*\* recommended by NIOSH

### 3. HAZARDS IDENTIFICATION

#### PHYSICAL PROPERTIES:

Appearance: White liquid  
 Odor: Faint odor

**EMERGENCY OVERVIEW:** CAUTION Harmful if swallowed. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, or clothing.

**SYMPTOMS OF ACUTE EXPOSURE:** Exposure may cause mild irritation of eyes, skin or respiratory tract. If swallowed, nausea, vomiting, or diarrhea can result. A skin sensitization (allergic) reaction may occur in some individuals.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known

**UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZAARDS:** Thermal decomposition products may include, but are not limited to, carbon monoxide, hydrogen cyanide, and acetonitrile. This product is a NFPA Class IIIB Combustible Liquid.

### 4. FIRST AID

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

**NOTE TO PHYSICIAN:** If ingested, induce emesis or lavage stomach. Treat symptomatically.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT:** >200°F (TCC)

**FLAMMABLE LIMITS (% IN AIR):** Not Applicable

**AUTOIGNITION TEMPERATURE:** Not Applicable

**FLAMMABILITY:** Not Applicable

**FIRE & EXPLOSION HAZARD:** Thermal decomposition products may include, but are not limited to, carbon monoxide, hydrogen cyanide, and acetonitrile. This product is a NFPA Class IIIB Combustible Liquid.

**FIRE-FIGHTING EQUIPMENT:** Use dry chemical, foam, or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes, or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated.

## 6. ACCIDENTAL RELEASE MEASURES

**ACTION TO TAKE FOR SPILLS/LEAKS:** Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and a NIOSH-approved chemical cartridge pesticide respirator with dust/mist pre-cartridges of a self-contained breathing apparatus (SCBA). For small spills cover with an absorbent material such as pet litter. Sweep up and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies. Do not contaminate water, food, or feed by disposal or cleaning of equipment.

## 7. HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING:** Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Avoid contact with skin or eyes. Wash thoroughly with soap and water after handling. Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

**PRECAUTIONS TO BE TAKEN IN STORAGE:** Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material. Do not allow product to freeze. Store above -5° C (23°F).

**STORAGE TEMPERATURE (MIN/MAX):**

Minimum: 23° F (-5° C)

Maximum: Normal ambient temperatures.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATION AND ON-FARM APPLICATIONS, CONSULT THE PRODUCT LABEL.**

**INGESTION:** Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.

**EYE CONTACT:** To avoid eye contact, wear safety glasses with side shields or chemical goggles.

**SKIN CONTACT:** To avoid skin contact, wear rubber gloves, rubber boots, long-sleeved shirt, long pants and a head covering.

**INHALATION:** To avoid breathing mist or spray, wear a NIOSH-approved chemical cartridge pesticide respirator with dust/mist pre-cartridges or a supplied-air respirator.

**USER SAFETY RECOMMENDATIONS:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENGINEERING CONTROLS:** Refer to product label.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** White Liquid

**ODOR:** Faint Odor

**RELATIVE DENSITY:** 1.103 @ 22° C

**pH:** 6-8.7 @ 25° C

**FLASH POINT:** >200°F (TCC)

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable under normal ambient and anticipated storage conditions.

**HAZARDOUS POLYMERIZATION:** Will Not Occur

**CONDITIONS TO AVOID:** Do not allow product to freeze. Store above -5° C (23°F).

**HAZARDOUS DECOMPOSITION PRODUCTS:** None Known

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY/IRRITATION STUDIES:

Ingestion:	Oral LD50 (Rat)	Females: 972 mg/kg body weight Males: between 1,000 & 3,000 mg/kg body weight
Dermal:	Dermal LD50 (rabbit)	>5,000 mg/kg body weight
Inhalation:	Inhalation LC50 (rat)	2.13 mg/L (4 hrs)
Eye irritation:	Mildly irritating	
Dermal irritation:	Non-irritating	
Skin sensitization:	Not a contact sensitizer	

### MUTAGENIC POTENTIAL:

ATRAZINE: Not mutagenic

### REPRODUCTIVE HAZARD POTENTIAL:

ATRAZINE: No adverse reproductive affects observed.

### CHRONIC/SUBCHRONIC TOXICITY STUDIES:

ATRAZINE: Cardiotoxicity in Long Term Study with High Doses (Dogs)

### CARCINOGENIC POTENTIAL:

ATRAZINE: Mammary Tumors (Female Sprague-Dawley Rats), Sex and Strain Specific  
None Observed (Male Sprague-Dawley Rats, F-344 Rats or Mice)

### TARGET ORGANS:

ATRAZINE: Heart

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL HAZARDS** Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

**SUMMARY OF EFFECTS:** Slight toxicity to fish and wildlife

### ECO-ACUTE TOXICITY

<b>Atrazine:</b>	Rainbow Trout 96-hours LC50 =9.9 mg/L
	Bluegill Sunfish 96-hours LC50 =42 mg/L
	Bobwhite Oral LD50 940 mg/kg
	Bobwhite 8-day Dietary LC50>5,000 ppm
	Mallard 8-day Dietary LC50 >5,000 ppm
	Invertebrate <i>Ceriodaphnia dubia</i> 48 HR LC50 4.9 mg A.I./L
	Peking Duck LD50>10,000 mg/kg
	Bees LC <sub>50</sub> > 100 µg/bee

**ECO-CHRONIC TOXICITY**

**Atrazine:** Fish (Fathead minnow) Early Life Stage MATC >0.25 and <0.46 mg A.I./L  
Mallard Reproduction NOEC 225 ppm a.i.  
Bobwhite Reproduction NOEC 225 ppm a.i.  
Invertebrate (Ceriodaphnia dubia) Life Cycle NOEL 2.5 ppm

**ENVIRONMENTAL PERSISTENCE/MOBILITY:** Stable in sterile water, both in the light and dark. In laboratory soil, degrades slowly under both aerobic and anaerobic conditions in the dark ( $t_{1/2}$ ~5 mo.); more rapidly in the light ( $t_{1/2}$ ~45 d). Exhibits medium to very high mobility with four soil textures (Koc= 39 to 155).

**13. DISPOSAL CONSIDERATIONS:**

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Wastes resulting from the use of this product are acutely toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office.

**CONTAINER DISPOSAL:** Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

**14. TRANSPORT INFORMATION:****DOT CLASSIFICATION:**

Not regulated

**INTERNATIONAL TRANSPORTATION:**

**MO (vessel):** Not regulated

**IATA (air):** Not regulated

**15. REGULATORY INFORMATION:****SARA TITLE III CLASSIFIED:**

**Section 302** Not applicable

**Section 311/312:** Acute Health Hazard  
Chronic Health Hazard

**Section 313 chemical(s):** Atrazine (42.9%) (CAS No. 1912-24-9)

**CA PROPOSITION 65:** Not applicable

**CERCLA REPORTABLE QUANTITY (RQ):** None

**RCRA CLASSIFICATION:** Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

**TSCA:** ingredients of this product are listed on the TSCA inventory or are exempt.

**16. OTHER INFORMATION:**

NFPA HAZARD RATINGS		0	Least
Health:	1	1	Slight
Flammability:	1	2	Moderate
Reactivity:	0	3	High
		4	Severe

**MSDS DATE:** 09-26-09; based on 10-20-08 version.

The information contained herein is given in good faith and is believed to be correct, but no warrant, express or implied, is made. Consult Tenkoz, Inc. for further information.