

MATERIAL SAFETY DATE SHEET

ATRAZINE 50% SC

1. PRODUCT IDENTIFICATION

Common name: Atrazine

Chemical class: Triazine

Manufacturer: Shanghai Tenglong Agrochem Co., Ltd.

Add: Yangpu building 24B, No.2005, Huangxing Road, Yangpu Shanghai

Phone Numbers: Tel: 86-21 5506 3225

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2. COMPOSITION (INFORMATION ON INGREDIENTS)

Component	CAS NO.	Purpose in the formulation	Portion(w/w)
Atrazine	1912-24-9	Active ingredient	45.6%
Ethylene glycol	107-21-1	Solvent	8%
Sodium Ligninsulfonate	8061-51-6	Dispersing Agent	6%
Water	7732-18-5		to 100

3. HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Do not breathe dust or spray mist. Avoid contact with eyes, skin or clothing.

Potential health effects

(1) ACUTE OVEREXPOSURE

Exposure to Atrazine may cause irritation of eyes, skin, or respiratory tract. If swallowed, nausea, vomiting, or diarrhea can result. A skin sensitization (allergic) reaction may occur in sensitive individuals. Ingestion may result in kidney damage. May be absorbed through the skin.

(2) CHRONIC OVEREXPOSURE

Long-term exposure to low levels of atrazine is not known to cause any chronic ill effects in humans.

4. FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician.

EYE AND SKIN CONTACT: Immediately flush eyes with plenty of water for at

least 15 minutes. Call a physician. Flush skin with water. Wash clothing before reuse.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: There is not a specific antidote if atrazine is ingested. If a large amount has been ingested and emesis has been inadequate, lavage stomach. Five mg/kg of activated charcoal suspension (50 g/400 ml water) can be given to absorb the remaining toxicant.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Dry chemical, CO₂, halon, water spray, standard form

UNUSUAL FIRE AND EXPLOSION HAZARDS

Prevent use of contaminated buildings, area, and equipment until decontaminated.

SPECIAL FIRE FIGHTING PROCEDURES

Move containers from fire area if possible. Extinguish using agents suitable for surrounding fire. Use flood Product. Keep material out of sewers and water sources. Do not touch spilled material. Avoid breathing hazardous fumes; keep upwind. Utilize self-contained breathing apparatus with full-face piece operated in pressure demand or other positive pressure mode. Evacuate nonessential personnel from the area to prevent exposure to fire, smoke, fumes, or products of combustion

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS LEAKED OR SPILLED

Utilize personal protective equipment. Cover the spill with an absorbent material such as cat litter. Sweep up the material and place in a labeled container, or the original container, and seal for later disposal or use. Wash the spill area with water containing a strong detergent, absorb with cat litter or other absorbent material, sweep-up, and place in a sealed, labeled container. Rinse the spill area with water to remove any residue. Do not allow wash or rinse water to contaminate water supplies.

WASTE DISPOSAL METHOD

Do not reuse product container. Dispose of product containers, waste containers, and residues in accordance with Federal, State, and local regulations

7. HANDLING AND STORAGE

HANDLING: Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

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 clothes. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing

STORAGE: Store the product in the original container only. Do not contaminate water, other

pesticides, fertilizer, food, or feed in storage. Avoid contact with water. In case of a spill, dispose of wastes in compliance with local, state and federal regulations.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION

NIOSH/MSHA approved respiratory devices to protect against toxic dusts and pesticides.

PROTECTIVE GLOVES

Impervious gloves to prevent skin contact.

EYE PROTECTION

Splash-proof or dust-resistant safety goggles to prevent eye contact with this substance. Contact lenses should not be worn.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

When necessary utilize impervious clothing, rubber boots, hat, and other equipment to prevent skin contact with this substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: white liquid

Odor: odorless

Boiling point: Approx 100°C at 100kPa

Freezing /Melting Point: N/A. Liquid at normal temperatures

Volatiles: Water component

Vapour Pressure: 2.37 kPa at 20°C (water vapour pressure). Negligible for atrazine

PH: 6.0-9.0

10. STABILITY AND REACTIVITY

Incompatibility: Alkalis and mineral acid

Decomposition: Hazardous gases or vapors can be released, including carbon monoxide, hydrogen cyanide, acetonitrile.

Polymerization: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicity - This product is slightly hazardous (WHO Class III)

Swallowed: LOW TOXICITY

Tests on rats indicate a low toxicity following single doses LD50 = approx. 2800 mg/kg

Dermal absorption: LOW TOXICITY

Tests on rats indicate a low toxicity following single doses LD50 <5000 mg/kg

Inhaled: LOW TOXICITY

Tests on rats indicate a low toxicity following single doses of a similar product.

LC50 (1 h) >406 mg/m³, highest attainable concentration

Irritation (based on studies with rabbits)

Eye: NON-IRRITANT

Skin: NON-IRRITANT

Sensitisation - (guinea pigs).

Skin: NOT A SENSITISER

CHRONIC (Active Ingredient)

Atrazine technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained. After long-term administration (ie, close to 2 years of continuous feeding) a slight increase in the incidence of mammary tumours was reported in one species (rat), one sex (female) and one strain (Sprague-Dawley) in one study at higher doses. A more recent study (1992) using Sprague-Dawley rats showed no significant difference between rats fed normal diet and those fed on a diet containing atrazine with regard to the incidence of tumours. Recent studies with the Fischer rat strain have shown no evidence of tumour producing potential. The relevance of the mammary tumour finding to humans is doubted as epidemiological studies of workers involved in the production of atrazine for up to 30 years have shown no evidence of health problems associated with atrazine exposure. Atrazine has been listed by IARC as a Class 3, not classifiable as to carcinogenicity to humans.

12. ECOLOGICAL INFORMATION

(For technical)

Fish:

LC50 96 hour	
Rainbow trout	4.5- 11.0 mg/litre
Bluegill	16 mg/litre
Coho salmon	15 mg/litre
Catfish	7.6 mg/litre
Guppy	4.3 mg/litre

Birds:

LC50 (5 days dietary exposure)	
Bobwhite quail	5000 mg/kg diet
Japanese quail	> 5000 mg/kg diet
Ring-necked pheasant	> 5000 mg/kg diet
Mallard duck	> 5000 mg/kg diet



Other species:

Daphnia magna	EC50 (48h)	6.1 mg/litre
	EC50 (21 days)	>0.12 mg/litre
Bees	LD50 (oral)	> 97 µg/bee
	LD50 (contact)	>100 µg/bee
Earthworm	LC50 (14 days)	78 mg/kg of soil

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, state, or local procedures.

ENVIRONMENTAL HAZARDS

Atrazine, one of the active ingredients of DuPont "Basis" Gold, is a pesticide that can move (seep or travel) through soil and can contaminate groundwater that may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply "Basis" Gold where the water table (groundwater) is close to the surface and where the soils are very permeable (i.e., well drained soils). Local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater. Atrazine is toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Water Soluble Packaging: Do not reuse the outer box or the resealable bags. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by open burning. If it is burned, stay out of smoke. If the resealable bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above.

14. TRANSPORT INFORMATION

Should be transported and stored in clearly labelled, rigid and leak-proof containers. Containers should be kept under lock and key, secure from access by children and other unauthorized persons and well away from food and drink

15. REGULATORY INFORMATION



PRECAUTIONS TO BE TAKEN IN HANDLING & STORING

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages, or tobacco products in the storage area. 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.

16. OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.