



# Material Safety Data Sheet

## SECTION 1: IDENTIFICATION OF THE CHEMICAL PRODUCT

**Product Name:** TARAZINE 900 WG HERBICIDE

**Product Type:** Group C Herbicide/ 1,3,5 – triazine derivative

**Product Use:** Herbicide for the control of annual weeds in sorghum, maize, sweet corn, saccaline, broom millet, sugar cane, TT-canola, lupins and other crops as per Directions for Use.

## SECTION 2 : HAZARD IDENTIFICATION

### Statement of Hazardous Nature:

This product is classified as hazardous according to the criteria of NOHSC Australia. Xn – Harmful, N – Dangerous for the environment.

**Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.**

**Risk Phrases:** R48/22, R43, R50/53. Harmful: danger of serious damage to health by prolonged exposure if swallowed. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Safety Phrases:** S2, S22, S24/25, S28, S36/37, S60, S61. Keep out of reach of children. Do not breathe dust. After contact with skin, wash immediately with plenty of soap and water. If swallowed, contact a doctor or Poisons Information Centre immediately and show this MSDS or label. Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/MSDS.

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**Marine Pollutant:** None allocated.

**SUSDP Classification:** S5

**UN Number:** None allocated.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion
Atrazine	1912-24-9	93.7%
Other non-hazardous ingredients	-	to 100%

## SECTION 4: FIRST AID MEASURES

Call The Poisons Information Centre if you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Skin Contact:** Gently brush away excess solids. Irritation is unlikely. However, if irritation occurs, wash affected area gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until product is removed. If irritation persists, repeat flushing and obtain medical advice and if necessary, medical treatment.

**Eye Contact:** Gently brush away excess solids from eye and eye area. Irritation is unlikely. However, if irritation occurs, wash affected eye(s) gently and thoroughly with water for 5 minutes or until product is removed. If irritation persists and lasts for more than a few minutes, repeat flushing and obtain medical advice and if necessary, medical treatment. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and contact a Poisons Information Centre or a doctor.

**Advice to Doctor:** Treatment is symptomatic.

## SECTION 5: FIRE FIGHTING MEASURES

**Fire and Explosion Hazards:** There is no risk of an explosion from this product under normal circumstances if involved in a fire. However, violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Fire Fighting:** Fire decomposition products from product may be toxic if inhaled. Take appropriate protective measures. When fighting fires wear a splash suit complete with self contained breathing apparatus (AS/NZ 1715/1716). If a significant quantity of this product is involved in a fire, contact your local fire department. Bund area with sand etc to contain runoff from entering drains.

**Extinguishing Media:** Use foam, carbon dioxide, dry powder or water-fog.

**Flash point:** Not flammable.

**Upper Flammability Limit:** No data. **Lower Flammability Limit:** No data.

**Autoignition temperature:** No data. **Flammability Class:** No data.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Sweep up and shovel, or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## SECTION 7: HANDLING AND STORAGE

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

**Flammability:** Not flammable.

## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Exposure standards:

Exposure limits for Atrazine have been set at 5mg/m<sup>3</sup> (8 hr TWA).

The ADI for Atrazine is set at 0.005mg/kg/day. The corresponding NOEL is set at 0.5mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from the Australian ADI List, Dec 2004.

**Engineering Control:** No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

### Personal Protective Equipment:

Australian Standards regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**

**Eye Protection:** Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Skin Protection:** If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes

and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: PVC, rubber.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Safety deluge showers should, if practical, be provided near to where this product is being used.

**Inhalation:** Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a type G cartridge, suitable for agricultural chemicals.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Physical Description & colour:** Off-white coloured granules.

**Odour:** No specific odour.

**Boiling Point:** Not applicable.

**Freezing/Melting Point:** No specific data. Solid at normal temperatures.

**Volatiles:** No data.

**Vapour Pressure:** No data.

**Vapour Density:** No data.

**Specific Gravity:** No data.

**Water Solubility:** Wettable – disperses in water.

**pH:** No data.

**Odour Threshold:** No data.

**Evaporation Rate:** No data.

**Autoignition temp:** No data.

**Flash point:** Not flammable, no data.

**Flammability limit:** No data.

**Partition coefficient (octanol/water):** No data.

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions of storage and use as described on the label and in section 7.

**Reactivity:** This product may react with strong oxidizing agents.

**Conditions to Avoid:** Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** Strong oxidising agents.

**Fire Decomposition:** Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Typical compounds produced are carbon dioxide, carbon monoxide, nitrogen compounds, nitrogen oxides, hydrogen chloride and hydrogen cyanide. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Hazard reactions:** None

## SECTION 11: TOXICOLOGICAL INFORMATION

Information profile for Atrazine is available at <http://extoxnet.orst.edu/pips/atrazine.htm>

### Health Effect from likely routes of exposure - Animal Toxicity data:

**Acute toxicity:** Atrazine is slightly to moderately toxic to humans and other animals. It can be absorbed orally, dermally, and by inhalation. Symptoms of poisoning include abdominal pain, diarrhea and vomiting, eye irritation, irritation of mucous membranes, and skin reactions. Atrazine is a mild skin irritant. Rashes associated with exposure have been reported. The oral LD50 for atrazine is 3090 mg/kg in rats, 1750 mg/kg in mice, 750 mg/kg in rabbits, and 1000 mg/kg in hamsters. The dermal LD50 in rabbits is 7500 mg/kg and greater than 3000 mg/kg in rats. The 1-hour inhalation LC50 is greater than 0.7 mg/L in rats. The 4-hour inhalation LC50 is 5.2 mg/L in rats.

**Chronic toxicity:** Some 40% of rats receiving oral doses of 20 mg/kg/day for 6 months died with signs of respiratory distress and paralysis of the limbs. Structural and chemical changes in the brain, heart, liver, lungs, kidney, ovaries, and endocrine organs were observed. Rats fed 5 or 25 mg/kg/day of atrazine for 6 months exhibited growth retardation. In a 2-year study with dogs, 7.5 mg/kg/day caused decreased food intake and increased heart and liver weights. At 75 mg/kg/day, there were decreases in food intake and body weight gain, increased adrenal weight, lowered blood cell counts, and occasional tremors or stiffness in the rear limbs.

**Reproductive effects:** Dietary doses of atrazine given to rats on days 3, 6 and 9 of gestation up to about 50 mg/kg/day caused no adverse reproductive effects.

**Teratogenic effects:** Atrazine does not appear to be teratogenic. In mice, atrazine did not cause abnormalities in fetuses whose dams were given doses of 46.4 mg/kg/day during days 6 through 14 of gestation.

**Mutagenic effects:** The weight of evidence from more than 50 studies indicates that atrazine is not mutagenic.

**Carcinogenic effects:** Atrazine did not cause tumors when mice were given oral doses of 21.5 mg/kg/day from age 1 to 4 weeks, followed by dietary doses of 82 mg/kg for an additional 17 months. However, mammary tumors were observed in rats after lifetime administration of high doses of atrazine. Thus, available data regarding atrazine's carcinogenic potential are inconclusive.

**Organ toxicity:** Lethal doses of atrazine in test animals have caused congestion and/or hemorrhaging to the lungs, kidneys, liver, spleen, brain, and heart. Long-term consumption of high levels of atrazine has caused tremors, changes in organ weights, and damage to the liver and heart.

**Fate in humans and animals:** Atrazine is readily absorbed through the gastrointestinal tract. When a single dose of 0.53 mg atrazine was administered to rats by gavage, 20% of the dose was excreted in the feces within 72 hours. The other 80% was absorbed across the lining of the gastrointestinal tract into the bloodstream. After 72 hours, 65% was eliminated in the urine and 15% was retained in body tissues, mainly in the liver, kidneys, and lungs.

## SECTION 12: ECOLOGICAL INFORMATION

**Effects on birds:** Atrazine is practically nontoxic to birds. The LD50 is greater than 2000 mg/kg in mallard ducks. At dietary doses of 5000 ppm, no effect was observed in bobwhite quail and ring-necked pheasants.

**Effects on aquatic organisms:** Atrazine is slightly toxic to fish and other aquatic life. Atrazine has a low level of bioaccumulation in fish. In whitefish, atrazine accumulates in the brain, gall bladder, liver, and gut.

**Effects on other organisms:** Atrazine is not toxic to bees.

### **Environmental Fate:**

**Breakdown in soil and groundwater:** Atrazine is highly persistent in soil. Chemical hydrolysis, followed by degradation by soil microorganisms, accounts for most of the breakdown of atrazine. Hydrolysis is rapid in acidic or basic environments, but is slower at neutral pHs. Addition of organic material increases the rate of hydrolysis. Atrazine can persist for longer than 1 year under dry or cold conditions. Atrazine is moderately to highly mobile in soils with low clay or organic matter content. Because it does not adsorb strongly to soil particles and has a lengthy half-life (60 to >100 days), it has a high potential for groundwater contamination despite its moderate solubility in water.

**Breakdown in water:** Atrazine is moderately soluble in water. Chemical hydrolysis, followed by biodegradation, may be the most important route of disappearance from aquatic environments. Hydrolysis is rapid under acidic or basic conditions, but is slower at neutral pHs. Atrazine is not expected to strongly adsorb to sediments. Bioconcentration and volatilization of atrazine are not environmentally important.

**Breakdown in vegetation:** Atrazine is absorbed by plants mainly through the roots, but also through the foliage. Once absorbed, it is translocated upward and accumulates in the growing tips and the new leaves of the plant. In susceptible plant species, atrazine inhibits photosynthesis. In tolerant plants, it is metabolized. Most crops can be planted 1 year after application of atrazine. Atrazine increases the uptake of arsenic by treated plants.

## SECTION 13: DISPOSAL CONSIDERATIONS

Instructions for the disposal of this product and its containers are listed on the product label.

For collection of unwanted rural chemicals, contact ChemClear @1800 008 182 [www.chemclear.com.au](http://www.chemclear.com.au) and for help with the disposal of empty drums, contact DrumMuster® [www.drummuster.com.au](http://www.drummuster.com.au) for local and State contacts.

## SECTION 14: TRANSPORT INFORMATION

**ROAD AND RAIL TRANSPORT:** Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG) for transport by Road and Rail.

**MARINE TRANSPORT:** Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

**UN Number:** None allocated.

**Class:** None allocated.

**Packing group:** None allocated.

## SECTION 15: REGULATORY INFORMATION

**SUSDP: Schedule 5; CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

**ADG Classification:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

**AICS (Australia):** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

**APVMA Registration Number:** 64047

## SECTION 16: OTHER INFORMATION

**This MSDS contains only safety-related information sourced from the public domain and analytical results on this product:**

### Acronyms:

**ADG Code** Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition

**AICS** Australian Inventory of Chemical Substances

**CAS number** Chemical Abstracts Service Registry Number

**Hazchem Number** Emergency action code of numbers and letters that provide information for fire fighters

**IARC** International Agency for Research on Cancer

**ASCC** Office of the Australian Safety and Compensation Council

**NTP** National Toxicology Program (USA)

**R-Phrase** Risk Phrase

**SUSDP** Standard for the Uniform Scheduling of Drugs & Poisons

**UN Number** United Nations Number

**Police and Fire Brigade: Dial 000 **Poisons Information Centre (13 1126)****

**Emergency contact: 04 0214 9346 (24 hours)**

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