

MATERIAL SAFETY DATA SHEET



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SANONDA HERBICIDE ATRAZINE 900 WG

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product Name: Sanonda Herbicide Atrazine 900 WG
Product Use: For the control of annual weeds in sorghum, maize, sweet corn, saccaline, broom millet, sugarcane and non-crop situations.
Supplier: Sanonda (Australia) Pty Ltd
ACN: 059 813 973
Address: Suite 822, St Kilda Rd Towers, No.1 Queens Rd, Melbourne VIC 3004
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2. HAZARD IDENTIFICATION

Statement of Hazardous Nature

Hazardous according to criteria of Worksafe Australia. Non-dangerous goods.

Risk Phrase(s):

R20/22 Harmful through inhalation, and if swallowed.

R36 Irritating to eyes.

R40 Harmful: possible risk of irreversible effects.

R43 May cause sensitization by skin contact.

Safety Phrase(s):

S2 Keep out of reach of children.

S20 When using, do not eat and drink.

S25 Avoid contact with eyes.

S28 After contact with skin, wash immediately with plenty of water.

S38 In case of insufficient ventilation, wear suitable respiratory equipment.

S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show this container or label.

S36/37 Wear suitable protective clothing and gloves.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Entity	CAS No	Concentration (g/L)	TWA (mg/m³)	STEL (mg/m³)
Atrazine	1912-24-9	900	Not set	Not set
Surfactants	Secret	Balance	Not set	Not set

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (phone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

FIRST AID

Inhalation:

Not volatile. Inhalation of dust may cause respiratory irritation. Remove affected persons into fresh air.

Skin Contact:

Remove contaminated clothing and wash affected skin thoroughly with soap and water.

Eye Contact:

Hold eyes open, flood with water for at least 15 minutes. Seek medical advice.

Ingestion:

If swallowed give two glasses of water immediately and induce vomiting. Seek medical advice.

SYMPTOM

Symptoms of poisoning include abdominal pain, diarrhea and vomiting, eye irritation, irritation of mucous membranes, and skin reactions. At very high doses, rats show excitation followed by depression, slowed breathing, incoordination, muscle spasms, and hypothermia. After consuming a large oral dose, rats exhibit muscular weakness, hypoactivity, breathing difficulty, prostration, convulsions, and death

ADVICE TO DOCTOR

No specific antidote. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS

This product is non-flammable, non-explosive and non-combustible. Extinguish warehouse or factory fires using fine water spray or foam. Do not allow fire-water to enter drains.

EXTINGUISHING MEDIA

Extinguish fire with water, foam.

FIRE FIGHTING

If a significant quantity of this product is involved in a fire, call the fire brigade.

HAZARDOUS COMBUSTION PRODUCTS

Carbon dioxide, carbon monoxide, nitrogen oxides, water.

FIRE INCOMPATIBILITY:

None.

HAZCHEM:

Not allocated.

PERSONAL PROTECTIVE EQUIPMENT

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6. ACCIDENTAL RELEASE MEASURES

SPILLS AND DISPOSAL

Shovel or sweep into drums. Dispose off in an approved land-fill. Wash contaminated surfaces with detergent and water. Do not allow spills to contaminate rivers, dams or other waterways.

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. Check packaging - there may be further storage instructions on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The following Australian Standards will provide general advice 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

ASCC Exposure limits	TWA (mg/m3)	STEL (mg/m3)
Atrazine	5	not set

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 Australian ADI List, Sept 2005.

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.

Ventilation:

This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.

Eye Protection:

Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

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.

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Protective Material Types:

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

Respirator:

If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Description & colour:	White granulated solid.
Odour:	Mild odour.
Boiling Point:	Not available. Atrazine boils at 205°C at 100kPa
Freezing/Melting Point:	No specific data. Solid at normal temperatures. Atrazine melts about 176°C
Volatiles:	No specific data. Expected to be low at 100°C.
Vapour Pressure:	3.85×10^{-2} mPa at 25°C
Specific Gravity:	1.23 (atrazine)
Water Solubility:	Wettable in water.
Coeff Oil/water distribution:	LogPKow = 2.5 at 25°C
Autoignition temp:	No data.

10. STABILITY AND REACTIVITY

Reactivity:

This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid:

Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities:

Strong acids, strong bases, strong oxidising agents.

Fire Decomposition:

Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest. Hydrogen cyanide gas acts very rapidly; symptoms and death can both occur quickly.

Polymerisation:

This product will not undergo polymerisation reactions.

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11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

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.

EFFECTS OF ACUTE EXPOSURE

General Information:

No harmful effects are expected if the precautions on the label and MSDS are followed.

Inhalation:

Avoid breathing. May cause irritation to mucous membrane and respiratory tract.

Ingestion:

The product is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. Possible symptoms of exposure are nausea, vomiting and headache.

Skin:

Prolonged contact with the concentrate may cause irritation.

Eye:

The product may cause irritation to the eyes unless washed off immediately.

EFFECT OF LONG TERM EXPOSURE

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.

Mutagenic effects:

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

Carcinogenic effects:

Atrazine did not cause tumours 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 tumours 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 haemorrhaging 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.

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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 faeces 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.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA

Effects on birds:

Atrazine is practically nontoxic to birds.

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.

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.

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.

13. DISPOSAL CONSIDERATIONS

Disposal:

There are many pieces of legislation covering waste disposal and they differ in each state and territory, so each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. The Hierarchy of Controls seems to be common - the user should investigate: Reduce, Reuse, and Recycle and only if all else fails should disposal be considered. Note that properties of a product may change in use, so that the following suggestions may not always be appropriate. The following may help you in properly addressing this matter for this product. Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

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14. TRANSPORT INFORMATION

ADG Code

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

Hazchem Code Not allocated.

U.N. Number 3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (Metsulfuron methyl)

IMO Class 9

Packing Group III

15. REGULATORY INFORMATION

Poisons Schedule: S5

Packaging & Labelling: CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR
USING

AICS (Australia): All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

This MSDS contains only safety-related information. For other data see product literature.

All due care and skill, so far as practicable, has been applied in the preparation and collation of the information in this MSDS. Each user of the Product named in this MSDS should read and consider the information contained in this MSDS in the context of how the Product will be stored, handled, used or applied in the workplace. In all circumstances, it is the responsibility of the user of the Product to ensure that they have sought out the relevant safety data appropriate to their particular situation. Nothing contained in this MSDS shall be construed as a representation or recommendation to the user about the suitability or otherwise of the Product named in this MSDS for the user's particular situation. If the user requires any clarification or further information, the user should contact Sanonda (Australia) Pty Ltd.

CONTACT POINT:

Sanonda (Australia) Pty Ltd

Suite 822, St Kilda Road Towers,

No.1 Queens Road, Melbourne, VIC 3004

Telephone: 03 9863 8081

Facsimile: 03 9863 8083

National Poisons Information Centre: Dial 13 11 26 (from anywhere in Australia).

Please read all labels and booklets carefully before using product.