

SAFETY DATA SHEET

TARZAN

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: TARZAN
Other identifier: Atrazine 290 g/l + Terbutylazine 290 g/l SC
Pesticide Classification: Herbicide
Restrictions on use: Agriculture

Supplier

Enviro Bio-Chem (Pty) Ltd
 Co. Reg. No.: 2013/194774/07
 44 Kerk Street, Lichtenburg
 North West, South Africa 2740

Registration Holder

Enviro Bio-Chem (Pty) Ltd
 Co. Reg. No.: 2013/194774/07
 44 Kerk Street, Lichtenburg
 North West, South Africa 2740

Telephone: +27 12 006 0063
Fax: 086 541 7948
Website: www.envirobiochem.co.za

24 Hr Emergency Number: Spillage: 0861 000 366

In case of Poisoning:

Griffon Poison Information Centre: +27 82 446 8946
 Tygerberg Hospital: (+27 21) 931 6129
 Poison Emergency Enquiries: (+27 21) 689 5227

2. HAZARD IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	Hazard statements
Acute toxicity (oral, dermal)	Category 5	H303+H313
Skin sensitisation,	Category 1	H317
Specific target organ toxicity — Repeated exposure	Category 2	H373
Hazardous to the aquatic environment — Acute Hazard	Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard	Category 1	H410

The most important adverse effects:

The most important adverse physiochemical effects: None Known.

The most important adverse human health effects: May cause damage to organs through prolonged and repeated exposure.

Label elements:



Signal word: Danger

Hazard statements:

- H303+H313: May be harmful if swallowed or in contact with skin.
- H317: May cause an allergic skin reaction.
- H373: May cause damage to organs (heart, kidneys) through prolonged or repeated oral/dermal exposure
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- P102: Keep out of reach of children.
- P103: Read label before use.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264: Wash hands and face thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.
- P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
- P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
- P302+P352: IF ON SKIN: Wash with plenty of water.
- P314: Get medical advice/attention if you feel unwell.
- P321: Specific treatment (see supplemental first aid instruction on this label).
- P330: Rinse mouth.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364: Take off contaminated clothing and wash it before reuse.
- P391: Collect spillage.
- P501: Dispose of contents/container in accordance with local/regional/ national/international regulation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances/ Mixture: Mixture

Composition:

Chemical Name	CAS	Conc. (m/m%)	Classification EC 1272/2008
Atrazine	1912-24-9	25 – 50	Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Terbutylazine	5915-41-3	25 – 50	Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
Monoethylene glycol	107-21-1	< 5	Acute Tox. 5 (Dermal), H313 Acute Tox. 4 (Inhalation:dust,mist), H332 STOT RE 2, H373
Soprophor FL	105362-40-1	< 5	Acute Tox. 5 (Dermal), H313

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure and consult a doctor / poison control centre.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation persists / person feels unwell. Seek medical attention if you feel unwell after inhalation.

Skin: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). Wash contaminated clothing before reuse.

Eyes: Flush eyes with clean water. Lift eyelids to facilitate irrigation. If present, remove contact lenses and continue rinsing. Seek medical attention if irritation persists.

Ingestion: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water. If swallowed, get emergency medical help immediately.

Anticipated acute effects: May be harmful if swallowed or in contact with skin. May cause an allergic skin reaction.

Anticipated delayed effects: May cause damage to organs (heart, kidneys) through prolonged or repeated oral/dermal exposure.

Most important symptoms/effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide, dry powder, or alcohol-resistant foam for small fires and water spray can be used for larger fires or cooling of unaffected stock but avoid the accumulation of polluted run-off from the site.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: No information available.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes and skin. Do not breathe in spray mist or dust. Ventilate area of spill, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA and full turnout gear. Use an approved/certified respirator or equivalent. Avoid contact with eyes and skin. Do not breathe in fumes. Refer to section 8 for recommended personal protective equipment. Evacuate unnecessary personnel

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very toxic to aquatic organisms with long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.

Methods and Materials for Containment: Contain spilled product by diking area with sand or earth. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Methods and Materials for Clean-up: Contain spilled product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush

or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: May be harmful if swallowed. Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Wash all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed, in an isolated, dry, cool and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits:

Components	Exposure limits	Type of exposure limit	Source
Atrazine (1912-24-9)	2 mg/m ³	MAK (mg/m ³)	Austria - Occupational Exposure Limits
Monoethylene glycol (107-21-1)	52 mg/m ³	IOELV TWA (mg/m ³)	EU - Occupational Exposure Limits
	20 ppm	IOELV TWA (ppm)	
	104 mg/m ³	IOELV STEL (mg/m ³)	
	40 ppm	IOELV STEL (ppm)	

Engineering Controls: It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved air-purifying respirator.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employee must wear appropriate protective clothing; boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Off- white
Odour	Slight
Odour threshold	No data available
pH	5 - 8
Melting point / freezing point (° C)	No data available
Boiling point (° C)	No data available
Flash point (° C)	No data available
Evaporation rate	No data available
Flammability	Non flammable
Upper /lower flammability limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density (25°C)	No data available
Water solubility (g/l) at 20°C	No data available
Partition coefficient: n-octanol/water partition coefficient	No data available
Auto-ignition temperature (° C)	No data available
Decomposition temperature (° C)	No data available
Viscosity, dynamic (mPa s)	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

10. STABILITY AND REACTIVITY

Chemical Stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of Hazardous Reactions: Not established.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures.

Incompatible Materials: Strong acids. Strong bases.

Hazardous Decomposition Products: Fume. Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Atrazine (1912-24-9):

Acute Oral LD₅₀ (rat): 1 960 - 2 220 mg/kg

Acute Dermal LD₅₀ (rat): >2000 mg/kg

Acute Inhalation LC₅₀ (rat, 4 hr): >5.8 mg/l air

Terbutylazine (5915-41-3):

Acute Oral LD₅₀ (rat): 1000 - 1590 mg/kg

Acute Dermal LD₅₀ (rat): >2000 mg/kg

Acute Inhalation LC₅₀ (rat, 4 hr): >5.3 mg/l air

Skin Irritation: Not classified.

Eye Damage/Irritation: Not classified.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: May cause damage to organs (heart, kidneys) through prolonged or repeated oral/dermal exposure.

Aspiration hazard: Not classified.

Chronic Effects (other targets e.g. developmental): Not classified

Potential adverse human health effects and symptoms: May be harmful if swallowed. May be harmful in contact with skin.

Additional Information: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

The product is classified as a marine pollutant.

ECOTOXICITY DATA:

Active ingredient: Atrazine CAS No. 1912-24-9

Fish

LC₅₀ (96 hr) 11 mg/l (rainbow trout); 4.3 mg/l (guppies).

Daphnia

LC₅₀ (48 hr) 29 mg/l

Algae

Static test EC₅₀ (72h) 0.01 mg/l (*Pseudokirchneriella subcapitata*)

Birds

Acute oral LD₅₀ 940 mg/kg (bobwhite quail); >2000 mg/kg (mallard ducks)

Dietary LC₅₀ 8 days >5000 mg/kg diet (Japanese quail); >1560 mg/kg (mallard ducks)

Bees

Toxicity to bees LD₅₀ (oral) >97 µg/bee.

Toxicity to bees LD₅₀ (contact) >100 µg/bee.

Worms

LC₅₀ (14d) 78 mg/kg soil (*Eisenia fetida*)

Biodegradability: The main metabolites of atrazine under all conditions are desethylatrazine and hydroxyatrazine. In soil, the field DT₅₀ ranges from 16 to 1174 days, with a median of 38.5 days. The longer DT₅₀ values are generally observed under cold or dry conditions, indicating slower degradation under these circumstances. In water/sediment systems, the DT₅₀ is 14–20 days in water and 35–80 days for the whole system. Under groundwater conditions, the DT₅₀ ranges from 105 to over 200 days, depending on the specific test system used. These data indicate that atrazine and its metabolites can persist for extended periods in certain environmental conditions.

Bioaccumulation: Atrazine has a log K_{ow} of 2.5, which suggests moderate lipophilicity. Based on this value, along with available data, atrazine and its main metabolites are not expected to bioaccumulate significantly in organisms.

Mobility: Atrazine exhibits variable adsorption to soils, with K_d values ranging from 0.2 to 18 mL/g and K_{oc} values from 39 to 173 mL/g. The desalkylated metabolites show adsorption characteristics similar to atrazine, with K_d values of 0.2–8.6 mL/g. In contrast, hydroxyatrazine is much more strongly adsorbed, with K_d values between 1.6 and 390 mL/g. These values suggest that atrazine and its desalkylated metabolites are relatively mobile in soil, whereas hydroxyatrazine is less mobile due to stronger adsorption.

Additional information: Avoid release to the environment.

Active ingredient: Terbutylazine CAS No. 5915-41-3

Fish

LC₅₀ (96 hr) 2.2 mg/l (rainbow trout); >5.7 mg/l (mirror carp).

Daphnia

LC₅₀ (48 hr) >69.3 mg/l

Algae

Static test EC₅₀ (72h) 0.012 mg/l (*Pseudokirchneriella subcapitata*)

Birds

Acute oral LD₅₀ >2000 mg/kg (Japanese quail and mallard ducks)
Dietary LC₅₀ 8 days >5620 mg/kg diet (Japanese quail and mallard ducks)

Bees

Toxicity to bees LD₅₀ (oral) >32 µg/bee.
Toxicity to bees LD₅₀ (contact) >22.6 µg/bee.

Worms

LC₅₀ (14d) >1000 mg/kg soil (Earthworms)

Biodegradability: In aerobic soils, dissipation is mainly driven by microbial activity, with metabolites formed through de-ethylation and hydroxylation, followed by eventual ring cleavage. This process also leads to the formation of non-extractable residues, accounting for 8–27% after 98 days. The median field DT₅₀ is 17.4 days, with a range of 6.5–149 days across 9 sites, indicating moderate persistence under field conditions. In water-sediment systems, terbutylazine dissipates with a DT₅₀ of 33–73 days for the whole system.

Bioaccumulation: The log K_{ow} of 3.4 indicates moderate lipophilicity. Based on this value, terbutylazine is not expected to significantly bioaccumulate in organisms.

Mobility: Terbutylazine exhibits medium adsorption to soils, with K_{roc} values of 224 mL/g (range 162–333, 12 soils) and median K_f of 3.0 mL/g (range 0.3–25.2, 12 soils). Overall, terbutylazine is considered only slightly mobile.

Additional information: Avoid release to the environment.

13. DISPOSAL CONSIDERATION

Pesticide Disposal: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Package Product Wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

Ecology - waste materials: Avoid release to the environment.

14. TRANSPORT INFORMATION

UN Number	3082
Road Transport ADR/IRD:	
Class:	9
Packaging group:	III
UN proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Atrazine 290 g/l + Terbutylazine 290 g/l)
Maritime Transport IMDG/IMO:	
Class:	9
Packaging group:	III
UN proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Atrazine 290 g/l + Terbutylazine 290 g/l)
Marine Pollutant (Y/N):	Yes
Air Transport IATA/ICAO:	
Class:	9
Packaging group:	III
UN proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Atrazine 290 g/l + Terbutylazine 290 g/l)

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 8, 2019.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996). SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management Waste Act 59 of 2008. Act 36 of 1947 of the Republic of South Africa. This product is registered under it is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Note: Read and understand all the information on the product label before using the product.

Other hazard statements, abbreviations and explanations:

H303+H313: May be harmful if swallowed or in contact with skin.

H317: May cause an allergic skin reaction.

H373: May cause damage to organs (heart, kidneys) through prolonged or repeated oral/dermal exposure

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD50 value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product, nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

Compiled: /
Reviewed: September 2025
Next revision: September 2030

For detailed information on revisions, contact the registration holder.