

**SECTION 1 – PRODUCT AND COMPANY INFORMATION**

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**Substance:** Atrazine  
**Product Name:** Geigy 500 SC  
**Product Use:** Herbicide  
**Creation Date:** August 2016  
**Revision Date:**

**24 Hr Emergency Number:** 083 564 8357  
**In case of Poisoning:** 083 564 8357  
**Poison Information Centre:** (021) 931 6129  
**Tygerberg Hospital:** (021) 931 6129  
**Poison Emergency Enquiries:** (021) 689 5227  
**In case of Spillage:** 083 564 8357

**HAZMAT:****SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS**

**Common name:** Atrazine  
**Chemical Name:** 6-Chloro-N2-ethyl-N4-(1-methylethyl)-1,3,5-triazine-2,4-diamine  
**Chemical Family:** Triazine  
**Chemical Formula:** C<sub>8</sub>H<sub>14</sub>ClN<sub>5</sub>  
**CAS No.:** 1912-24-9  
**Use:** A selective, emulsifiable systemic weedkiller for the post-emergence control of certain grasses in crops, forestry, seedbeds (including volunteer maize containing the glyphosate resistant gene) and industrial areas.  
**Formulation:** Atrazine 485 g/l plus related triazines 15 g/l soluble concentrate

**Hazardous ingredients of toxicological concern:**

<b><u>Inert:</u></b>	<b><u>Concern:</u></b>	<b><u>% present:</u></b>
Atrazine	Water contamination risk	±50 %
Water	No hazard	>40 %

**Symbols:** Xn, N  
**Risk-phrase(s):** R 22, R 36/38, R 43, R 48, R 50/53

**SECTION 3 - HAZARD IDENTIFICATION**



**Likely routes of exposure:** Skin contact, ingestion and inhalation. Slightly to moderately toxic.

**Skin contact:** May be irritant to skin and cause redness and discomfort. It is moderate skin sensitizes in animal tests.

**Eye contact:** May cause serious eye damage

**Inhalation:** Unlikely to cause harmful effects under normal conditions of handling and use, but may cause sore throat, headache, nausea, abdominal distress or increased respiration if large quantities is handled.

**Ingestion:** May cause damage to organs through prolonged or repeated exposure.

#### SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS

The acute toxicity of these herbicides for man is very low, and no adverse health effects from exposure to this combination herbicide have been reported. Symptoms of poisoning includes abdominal pain, diarrhea and vomiting, eye irritation, irritation of mucous membranes and skin reactions.

**Inhalation:**

If vapours of mists have been inhaled and irritation has developed, remove the source of contamination or move victim to fresh air.

The patient should be kept under observation and obtain medical attention if irritation persists.

**Skin contact:**

Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, seek medical advice immediately. Persons who become sensitized may require specialized medical management with anti-inflammatory agents.

**Eye contact:**

Immediately flush contaminated eyes with gently flowing clean water for 20 minutes, occasionally lifting upper and lower lids until no evidence of chemical remains (approximately 15 to 20 minutes). Obtain medical attention if irritation persists.

**Ingestion:**

If swallowed seek medical advice immediately and show the container, label, or this Data Sheet, if possible. DO NOT induce vomiting. Put the patient in the half up-right position and give plenty of water. Seek medical assistance immediately.

**Advice to Physician:**

No specific antidote is available. Treat symptomatically and supportive when required. If large amounts have been ingested, perform gastric lavage and administer activated charcoal.

#### SECTION 5 - FIRE-FIGHTING MEASURES

**Flash point:** None – This material is non-flammable.

**Extinguishing Media:**

For small fires, use foam, carbon dioxide, dry powder or halon extinguishing agents. For large fires, use foam or water-fog; avoid use of water jet. Contain run-off water with, for example, temporary earth barriers.

**Fire Fighting:**

Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use an unmanned hose holder or monitor nozzles. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Do not scatter the material. Avoid pollution of waterways.

Generating poisonous and corrosive fumes containing: carbon monoxide, nitrogen oxides and hydrochloric acid.

**Personal protective equipment:**

Fire may produce irritating and/or toxic vapours, mists or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)

**Personal precautions:** Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see section 8.

**Environmental precautions:** Atrazine is slightly toxic to fish. Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to Department of Water/Environmental Affairs. Considered as Marine Pollutant.

**Occupational Spill:** Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

**For spills:** Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

Open burning or dumping of this material is prohibited.

Do not get water inside containers.

## SECTION 7 - HANDLING AND STORAGE REQUIREMENTS

**Handling:** Avoid contact with eyes, skin and clothing. Avoid inhalation of spray and vapour. Use with adequate ventilation. Do not eat, drink or smoke while working. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide gets inside. The wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

**Storage:** Keep under lock and key out of reach of unauthorized persons, children and animals. Store in its original container in isolated, dry, cool and well-ventilated area. Not to be stored next to feeds, food and water supplies. Local regulations should be complied with.

## SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

**PERSONAL PROTECTIVE EQUIPMENT:**

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection. Comply with occupational safety, environmental, fire, and other applicable regulations.

**Eye protection:** The use of safety goggles is recommended.

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.

**Personal Protective Clothing:** Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

**Gloves:** Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	White, thick liquid, paint-like
<b>Odour:</b>	No odour
<b>Flash Point:</b>	Not flammable
<b>Solubility:</b>	Suspendible in liquid

Density: 1.109 ±0.005 g/ml

## SECTION 10 - STABILITY AND REACTIVITY

### Stability:

Relatively stable in neutral, weakly acids and alkaline media, but rapidly hydrolyzed to the hydroxy derivatives in strong acids and alkaline and at 70°C neutral media.

### Reactivity:

Spray solutions containing this product should be mixed or applied using stainless steel, aluminium, fiberglass or plastic-lined containers. Compatible with most herbicides at normal rates, but flocculation might occur with paraquat.

### Hazardous decomposition product(s):

Combustion or thermal decomposition will evolve toxic and irritant vapours of chlorine and nitrous oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

<b>Acute oral LD50, rats:</b>	>3000 mg/kg
<b>Acute dermal LD50, rats:</b>	>4000 mg/kg
<b>Inhalation LC50, 4hours, rats :</b>	>5.8 mg/ℓ air (Technical)
<b>Acute skin irritation:</b>	Mildly irritant, may cause skin sensitization
<b>Acute eye irritation:</b>	Moderate irritant
<b>Teratogenicity/Development:</b>	Atrazine does not appear to be teratogenic.
<b>Reproductivity:</b>	Dietry 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.

**Mutagenicity:** Atrazine is not mutagenic.

**ADI:** 0.005 mg/kg b.w.

## SECTION 12 - ECOLOGICAL INFORMATION

### Degradeability:

Atrazine is highly persistent in soil. Chemical hydrolysis, followed by degradation by soil micro-organisms, accounts for most of the breakdown of atrazine. Addition of organic material increases the rate of hydrolysis. Atrazine can persist for longer than 12 months under dry or cold conditions. Moderately to highly mobile in soils with low clay or organic matter content. It does not absorb strongly to soil particles and therefore has a lengthy half-life of 60 to >100 days. Despite its moderately solubility in water, atrazine has a high potential for groundwater contamination.

In water atrazine is chemically hydrolyzed, followed by biodegradation. Bioconcentration and volatilization of atrazine are not environmentally important.

In tolerant plants, atrazine is readily metabolized to hydroxyatrazine and amino acid conjugates, with further decomposition. In sensitive plants, unaltered atrazine accumulates, leading to chlorosis and death. Water GV: 2 µg/ℓ.

### ECOTOXICOLOGY:

**Bees:** Not Toxic to bees

LD<sub>50</sub> (oral): >97 µg/bee

LD<sub>50</sub> (contact): >100 µg/bee

### Birds:

Oral LD<sub>50</sub>: Mallard Ducks: >2000 mg/kg

Bobwhite quail: 940 mg/kg

**Fish: Slightly to moderately toxic to fish.**

LC<sub>50</sub> (96h): Rainbow trout: 4.5 to 11.0 mg/ℓ

Bluegill sunfish: 16 mg/ℓ

LC<sub>50</sub> (48h): Daphnia: 6.9 mg/ℓ

### Earthworms:

LC<sub>50</sub> (14 days): 78 mg/kg soil

## SECTION 13 - DISPOSAL CONSIDERATION

### Waste Disposal:

In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed

of on site or at an approved waste disposal facility.

**Container Disposal:** Refer to the product label for instructions.

Container Refilling and Disposal: If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.

#### SECTION 14 - TRANSPORT INFORMATION

**UN NUMBER:** 3082  
**Road Transport ADR/ RID:**  
**Class:** 9  
**Packaging group:** III  
**Shipping name:** Environmentally hazardous substance, Liquid, N.O.S. (Atrazine 485 g/ℓ)

**Marine Transport IMDG/IMO:**  
**Class:** 9  
**Packaging Group:** III  
**Shipping Name:** Environmentally hazardous substance, Liquid, N.O.S. (Atrazine 485 g/ℓ)

**Air Transport (ICAO/IATA):**  
**Class:** 9  
**Packaging Group:** III  
**Shipping Name:** Environmentally hazardous substance, Liquid, N.O.S. (Atrazine 485 g/ℓ)

#### SECTION 15 - REGULATORY INFORMATION

**Symbol :** Xn, N  
**Indication of danger:** Harmful, Environmentally hazardous substance.

**Risk phrases:**

**R 22** Harmful if swallowed.  
**R 36/38** Irritating to eyes and skin.  
**R 43** May cause sensitization by skin contact.  
**R 48** Danger of serious damage to health by prolonged exposure.  
**R 50/53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases:**

**S 1/2** Keep locked up and out of reach of children.  
**S 24/25** Avoid any inhalation, contact with skin and eyes. Wear suitable protective clothing and gloves.  
**S 36/39** Wear suitable protective clothing and eye/face protection.  
**S 60** This material and its container must be disposed of as hazardous waste.  
**S 61** Avoid release to the environment. Refer to special instruction/safety data sheet.

#### SECTION 16 - OTHER INFORMATION

**Packaging:**

1L, 5L & 20L plastic containers and labelled according to South African regulations and guidelines.

**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 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.