

Safety Data Sheet (SDS)

According to UN GHS 9th Ed

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Version: 1.5

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Product identifier:

Identification as on the label/Trade name: **Combi 600 SC**

Relevant identification uses of the substance and uses advised against:

Identified uses: Herbicide.

Uses advised against: Use only as directed.

Details of the supplier of the Safety Data Sheet:

Green Island Investments Pty Ltd

P.O Box 1822, Heidelberg 1438

Emergency telephone numbers:

Griffon Poison information centre: 082 446 8946

Poisons Information Helpline: 0861 555 777

Spill Tech: 086 100 0366 (a/h)

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to

SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]	
Hazard classes/Hazard categories	Hazard statement
Skin sensitization (Category 1)	H317
Specific Target Organ Toxicity repeated exposure (Category 2)	H373
Hazardous to the aquatic environment (Acute 1)	H400
Hazardous to the aquatic environment (Chronic 1)	H410

For full text of H statements see section 16

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.

Label elements

Hazard pictograms:



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Signal Word: Warning

Hazard Statements:

H316: Causes mild skin irritation.

H317: May cause an allergic skin reaction.

H373: May cause damage to organs through prolonged or repeated exposure.

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

Precautionary Statements:

P273: Avoid release to the environment.

P280: Wear impervious rubber gloves and chemical safety goggles.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P310: Immediately call a POISON CENTRE.

P333+313: If skin irritation or rash occurs: Get medical advice.

P391: Collect spillage.

P501: Dispose of contents/container in accordance with local regulations.

Special labelling of certain mixtures: None known.

Other hazards: None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture Ingredients:

Substance name (IUPAC)	CAS –No.	Concentration % By weight	Classification
	EC-No.		EC1272/2008
Atrazine	1912-24-9	30%	Skin Sensitisation (H317) Specific Target Organ Toxicity Repeated Exposure 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Terbuthylazine	5915-41-3	30%	Acute Tox. 4; H302 Specific Target Organ Toxicity Repeated Exposure 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H413)
Polyaryl phenyl ether phosphate, amine salt / calcium salt	105362-40-1	6-8%	Specific Target Organ Toxicity Repeated Exposure 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H413)
Ethylene Glycol	107-21-1	1-5%	Acute Tox. 4; H302 Specific Target Organ Toxicity Repeated Exposure 2 (H373)

For full text of H statements see section 16

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.

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SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

In case of ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Most important symptoms and effects, both acute and delayed:

Anticipated acute effects:

May be harmful in contact with skin.

Causes mild skin irritation.

May cause an allergic skin reaction.

Anticipated delayed effects:

May cause damage to organs.

Most important symptoms / effects: None known.

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

SECTION 5. FIRE -FIGHTING MEASURE

Extinguisher media:

Suitable extinguisher media: Carbon dioxide, foam dry chemical and water fog.

SMALL FIRE: Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam.

LARGE FIRE: 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: Do not use high volume water jet, due to contamination risk.

Special hazards arising from the mixture:

During a fire, irritating and possibly toxic gasses may be generated by thermal decomposition or combustion. Closed container may explode if pressure builds up. Toxic or irritating gas may be generated during fire.

Advice for fire-fighters:

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

SECTION 6. ACCIDENTAL RELEASE

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

For emergency responders: Use an approved/certified respirator or equivalent, isolate the spill area and limit the access to emergency responders only. Avoid any contact with spilled material, use adequate protective clothes and gloves.

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Environmental precautions:

Cover drains. Prevent from entering soil, ditches, sewers, waterways and/or groundwater.

Methods for containment and cleaning up:

For small spills Contain spilled material if possible. Collect in suitable and properly labelled containers. Absorb with materials such as: sand, earth, vermiculite or diatomaceous earth.

For large spills Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in well labelled container for disposal according to local regulations.

Reference to other sections:

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for information on disposal.

Additional information: None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Use adequate protective equipment to avoid direct contact of product. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing.

Protective measures: Observe directions on label and instructions for use.

Advice on general occupational hygiene: Do not eat drink or smoke when handling this product.

Conditions for safe storage, including incompatibilities:

Store product in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Concentration

Components	Expose limit	Type of exposure limit	Source
Ethylene glycol	10, 60 mg/m ³	TWA	" Hazardous Chemical Substances Regulations 1995"

Exposure control:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.

Appropriate engineering controls: Provide exhaust ventilation or other engineering controls. Ensure that eyewash stations and safety showers are proximal to the work-station location.

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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.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Body protection: Appropriate impervious clothing is required to prevent skin contact with the product.

Respiratory protection: Respiratory protection is required; use an approved air-purifying respirator.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (form): Liquid.

Colour: Homogenous, slightly off-white, liquid.

Odour: Slight odour.

Odour threshold: No information available.

pH (at concentration): not available

Melting point/range (°C): No information available.

Boiling point/range (°C): not available.

Flash point (°C): > 60.5 °C (ASTM D93)

Evaporation rate: No information available.

Flammability : Not flammable.

Ignition temperature (°C): No information available.

Upper/lower flammability/explosive limits: No information available.

Vapour pressure (20°C): No information available.

Density: 1.120 g/l at 20 °C.

Relative density (25°C): No information available.

Water solubility (g/l) at 20°C: Suspends in water.

n-Octanol/Water partition coefficient: No information available.

Auto-ignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity, dynamic (mPa s): not available

Physical hazards:

Explosive properties: No information available.

Other information: Fat solubility (solvent-oil to be specified): No information available.

Bulk density: No information available.

Dissociation constant in water (p Ka): No information available.

Oxidation-reduction potential: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: The product is stable under normal conditions.

Chemical stability: Stable under normal storage conditions for 2 years.

Possibility of hazardous reactions: Slightly reactive to reactive with reducing agents, alkalis.

Conditions to avoid: Avoid extreme heats..

Incompatible materials: Compatible with most products

Hazardous decomposition products: No information available.

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SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Calculated according to GHS

Acute oral LD₅₀, rats (calculated): > 3260 mg/kg

Acute dermal LD₅₀, rats (calculated): > 4000 mg/kg

Inhalation LC₅₀, 4hours, rats:technical: > 13.05 mg/ℓ air

Acute skin irritation: mild irritant, may cause skin sensitization

Acute eye irritation: moderate irritant

Teratogenicity/Development:

Atrazine does not appear to be teratogenic.

Reproduction:

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.

Mutagenicity:

Atrazine and Terbutylazine are not mutagenic.

Carcinogenicity:

Atrazine did not cause tumors in mice. 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.

Terbutylazine is not carcinogenic.

ADI:

Atrazine: 0.005 mg/kg b.w

Terbutylazine: 0.0022 mg/kg b.w

SECTION 12. ECOLOGICAL INFORMATION

Degradability:

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 metabolised 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.

Terbutylazine is strongly adsorbed on soils. Koc 162 to 278 and Kd 2.2 to 25 are typical values for light agricultural soils.

Terbutylazine is only slightly mobile. Microbial degradation proceeds mainly by de-ethylation and hydroxylation, with eventual ring cleavage. Half-life in biologically active soil is 30 to 60 days.

ECOTOXICOLOGY:

Birds: Moderately toxic to birds.

Atrazine: LD₅₀: Bobwhite quail: 940 mg/kg

Mallard duck: > 2000 mg/kg

Terbutylazine: LD₅₀: Quails & Ducks: > 1000 mg/kg

Fish: Very toxic to fish.

Atrazine: LC₅₀ (96hrs): Rainbow trout: 4.5 to 11.0 mg/ℓ

Bluegill sunfish: 16 mg/ℓ

Terbutylazine: LC₅₀ (96hrs): Rainbow trout: 3.8 to 4.6 mg/ℓ

Bluegill sunfish: 7.5 mg/ℓ

Daphnia: Very toxic to Daphnia.

Atrazine: LC₅₀ 48 hours: 6.9 mg/ℓ

Terbutylazine: LC₅₀ 48 hours: 21 to 50.9 mg/ℓ

Bees: Not toxic to bees.

Atrazine: LD₅₀ (oral): > 97 µg/bee

LD₅₀ (contact): > 100 µg/bee

Terbutylazine: LC₅₀ (oral & contact): > 100 µg/bee

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Earthworms:

Atrazine: LC₅₀ (14 days): 78 mg/kg soil
Terbutylazine: LC₅₀ (7 days) > 200 mg/kg soil

Other:

Atrazine: Long-term studies in aquatic ecosystems indicate no permanent damage up to 0.020 mg/ℓ.

Terbutylazine: No effects on bacterial respiration and nitrification in range 10.9 to 109 mg/kg soil.

Product is considered a marine pollutant.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Consider suitable waste recycling, re-use or recovery options. Dispose of in accordance with municipal, provincial and national regulations. Waste Classification and Management Regulations (GN 634 of 2013). Dispose and or manage in accordance with the requirements contained in R634 Waste Classification & Management Regulations, R635 National Norms & Standards for the Assessment of Waste for Landfill Disposal and R636 National Norms & Standards for Disposal of Waste to Landfill.

Product/ packaging disposal: Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

SECTION 14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	3082	3082	3082
UN Proper shipping name:	Environmentally hazardous substance, liquid, N.O.S. (Atrazine 300 g/l +Terbutylazine 300 g/l)	Environmentally hazardous substance, liquid, N.O.S. (Atrazine 300 g/l +Terbutylazine 300 g/l)	Environmentally hazardous substance, liquid, N.O.S. (Atrazine 300 g/l +Terbutylazine 300 g/l)
Transport hazard class:	9	9	9
Packaging group:	III	III	III
Marine pollutant:	yes	yes	yes
Special precautions for user:	Not required	Not required	Not required
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code	Not required	Not required	Not required

Inland waterways: Not required.

Emergency response information: No information.

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SECTION 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 9, 2021.

Relevant information regarding restrictions:

EU regulations: Regulation EC 1272/2008 [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.

Chemical Safety Assessment carried out? No

SECTION 16. OTHER INFORMATION

Indication of changes: All sections.

Relevant H statements (number and full text):

STOT SE-2 Specific Target Organ Toxicity repeated exposure (Category 2)

Aquatic acute 1: Hazardous to the aquatic Environment (Acute 1)

Aquatic chronic 1: Hazardous to the aquatic Environment (Chronic 1)

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

Training instructions: No special training required. Read label of product.

Further information: This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to readers: Employers should use this information only as a supplement to other information gathered by them and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.