Safety Data Sheet (SDS) Outpace Flowable

According to UN GHS 8th Ed
Revision Date: 21/07/2022

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Version: 1.1

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

Product identifier:

Identification as on the label/Trade name: Outpace Flowable

Common name: Terbuthylazine 250g/L + Simazine 250g/L 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:

Enviro Bio-Chem (Pty) Ltd, 44 Kerk Street,
Lichtenburg, North West, South Africa, 2740

Details of the Registration Holder:

Enviro Industries (Pty) Ltd, 44 Kerk Street,
Lichtenburg, North West, South Africa, 2740

Contact Details:

Telephone: +27 87 231 7261
Fax: 086 541 7948
Website: www.envirobiochem.co.za

Emergency telephone numbers:

24 Hour Emergency Number: Bateleur: +27 83 123 3911
Griffon Poison Information Centre: +27 82 446 8946
Poisons Information Helpline: 0861 555 777
Tygerberg Hospital: +27 21 931 6129

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to Regulation (EC) No 1272/2008 EU-GHS/CLP

Hazard classes/Hazard categories	Hazard statement
Acute toxicity oral (Category 4)	H302
Carcinogenicity (Category 2)	H351
STOT RE (Category 2)	H373
Aquatic Toxicity Acute (Category 1)	H400
Aquatic Toxicity Chronic (Category 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: Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Label elements

Hazard pictograms:
Signal Word: Warning

Hazard Statements:

H302	Harmful if swallowed
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated 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
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist, vapours and spray.
P264	Wash hands and face thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P308	If exposed or concerned: Get medical attention.
P391	Collect spillage
P501	Dispose of contents/container in accordance with local/regional/ national regulations

Other hazards: No

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: **Mixture**

Ingredients:

Substance name (IUPAC)	CAS Number.	Concentration % by weight	Classification EC1272/2008
Simazine	330-54-1	22.9%	Carcinogenicity (Category 2) H351 Aquatic Acute (Category 2) H400 Aquatic Chronic (Category 1) H410
Terbuthylazine	5915-41-3	23%	Acute Toxicity Oral (Category 4) H302 STOT RE (Category 2) H373 Aquatic Acute (Category 2) H400 Aquatic Chronic (Category 1) H410
Formalin 40% (anti bacteria)	25155-30-0	<0.1%	Acute Toxicity Oral (Category 3) H301 Acute Toxicity dermal (Category 3) H311 Acute toxicity inhalation (Category 3) H331 Skin corrosion (Category 1B) H314 Skin sensitisation (Category 1) h317 Germ Cell Mutagenicity (Category 2) H341

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.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

General: If symptoms persist, call a physician. Do not breathe mist/vapors/spray. Do not get in eyes,

on skin, or on clothing.

In case of inhalation: If inhaled, remove to fresh air. Treat symptomatically and supportively. Seek medical attention.
In case of skin contact: Remove contaminated clothing and wash skin with soap and plenty of water. Consult a physician if necessary. Wash clothing before reuse.
In case of eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
In case of ingestion: Rinse mouth. Drink plenty of water. If symptoms persist, call a physician Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: None known

Indication of any immediate medical attention and special treatment needed: Treat symptomatically and supportively.

SECTION 5. FIRE FIGHTING MEASURES

Extinguisher media:

Suitable extinguisher media: Foam. Dry powder. Carbon dioxide. Water spray.

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

Large Fire: Foam or water spray can be used for larger fires or cooling of unaffected stock but avoid the accumulation ofpolluted 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:

Hazardous decomposition products in case of fire: Refer to Section 10: Stability and Reactivity.

Advice for fire-fighters:

Remove spectators from surrounding area. Evacuate downwind. Remove container from fire area if possible. Avoid inhaling hazardous vapours and fumes from burning materials. Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Use an approved/certified respirator or equivalent.
Contain fire control agents for later disposal according to Section 13.

SECTION 6. ACCIDENTAL RELEASE

Personal precautions, protective equipment, and emergency procedures:

Personal precautions: Avoid inhalation of vapour and spray drift. Avoid contact with skin and eyes.
For emergency responders: 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:

Stop leak if without risk. Do not touch spilled material. Prevent entry into drains, watercourses, or confined areas: dike if needed. If the product contaminates public water, inform appropriate authorities immediately in accordance with local regulations. Dispose in a safe manner in accordance with local/national regulations.

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 drains, watercourses, or confined areas. 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 1 for emergency contact details

See section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See section 13 for information on disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Read the label before use. Use protective clothing. Avoid direct contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Do not breathe mist/vapours/spray. Do not eat, drink or smoke when using this product.

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. Wash contaminated clothing before reuse.

Conditions for safe storage, including incompatibilities:

Store locked up in the closed original packaging out of reach of children, unauthorised persons, and animals. Store in a dry, cool, well-ventilated area. This product should only be stored or applied using stainless steel, aluminium, fiberglass or plastic lined containers. Do not mix, store, or apply in galvanized or unlined mild steel containers or spray tanks. The product can react with such containers and tanks or produce hydrogen gas which may form a highly combustible mixture that can flash or explode if ignited by open flame, spark, cigarette or other ignition sources. Keep away from food, drink, and animal feed.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits (OEL): No information available.
Biological exposure indices (BEI): No information available.
Additional exposure limits under the conditions of use: No information available.

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 adequate ventilation, exhaust ventilation or other engineering controls. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protective Equipment

Eye/face protection: Wear chemical goggles or face shield when mixing or applying product.

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: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with the substance. Gloves: Employee must wear appropriate synthetic protective gloves to prevent contact with substance.

Respiratory protection: Avoid inhaling fumes or spray drift. 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 dust mask or NIOSH 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	Thick, free-flowing suspension concentrate that forms a fine suspension on dilution with water
Colour	White
Odour	No data available
Odour threshold	No data available
pH	6.0-7.0
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	Not flammable
Upper /lower flammability limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density (20°C)	1.11 – 1.14 g/mℓ
Water solubility (g/l) at 20°C	5 mg/l (Simazine) and 8.5 mg/l (Terbuthylazine)
Partition coefficient : n-octanol/water	No data available
Auto-ignition temperature (° C)	No data available
Decomposition temperature (° C)	No data available
Viscosity,	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	Not explosive

SECTION 10. STABILTY AND REACTIVITY

Reactivity: No data available
Chemical stability: Stable for up to 2 years under normal storage conditions
Possibility of hazardous reactions: No information available.
Conditions to avoid: Avoid sources of heat, free flames or spark generating equipment.
Incompatible materials: Spray solutions containing this product should be mixed, stored or applied using stainless steel, aluminium, fiberglass or plastic lined containers. Do not mix, store or apply in galvanized or unlined mild steel containers or spray tanks. The product can react with such containers and tanks or produce hydrogen gas which may form a highly combustible mixture that can flash or explode if ignited. Do not mix with other herbicides or pesticide except for products mentioned on the product label. Do not physically mix concentrate directly with other herbicides or pesticide concentrates, always dilute first.
Hazardous decomposition products: Thermal decomposition products may include toxic oxides of nitrogen and carbon and toxic and corrosive fumes of chlorides.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution: No data available

Information on toxicological effects:

Assessment of acute toxicity:
The product has not been tested. The data reported is for the main ingredients in the mixture.

Terbuthylazine CAS No. 5915-41-3

Acute toxicity:	
Acute Oral LD50 (rat)	1590-2000 mg/kg
Acute Dermal LD50 (rat): (rat male and female)	> 2000 mg/kg
Acute Inhalation LC50 - 4 h (rat male and female)	>5.3 mg/l air
Skin irritation/ corrosion (rabbits)	Not a skin irritant
Eye damage / irritation (rabbits)	Not an eye irritant
Respiratory or skin sensitization (guinea pig)	Does not cause sensitisation
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific Target Organ Toxicity STOT single exposure	No data available
Specific Target Organ Toxicity STOT repeated exposure	May cause damage to organs through prolonged or repeated exposure
Aspiration hazard	Not classified

Simazine CAS No. 122-34-9	
Acute toxicity:	
Acute Oral LD50 (rat)	500-1000 mg/kg
Acute Dermal LD50 (rat): (rat male and female)	> 2000 mg/kg
Acute Inhalation LC50 - 4 h (rat male and female)	>5.5 mg/l air
Skin irritation/ corrosion (rabbits)	Not a skin irritant
Eye damage / irritation (rabbits)	Not an eye irritant
Respiratory or skin sensitization (guinea pig)	Not a skin sensitizer
Germ cell mutagenicity	No data available
Carcinogenicity	Suspected of causing cancer
Reproductive toxicity	No data available
Specific Target Organ Toxicity STOT single exposure	No data available
Specific Target Organ Toxicity STOT repeated exposure	May cause damage to organs through prolonged or repeated exposure
Aspiration hazard	Not classified

SECTION 12. ECOLOGICAL INFORMATION

Terbuthylazine CAS No. 5915-41-3	
Toxicity	
Birds Acute oral LD_{50}	>2000 mg/kg Ducks and Japanese quail
Aquatic Toxicity Fish static test LC_{50} (96 hr) Aquatic Toxicity Daphnia static test EC_{50} (48 hr) Algae Toxicity static test EC_{50} (72h) Bee Toxicity LD_{50}	2.2 mg/l (rainbow trout) 11 mg/l Daphnia magna (Water flea) 0.028 mg/l *Pseudokirchneriella subcapitata* (green algae) >200 µg/bee (oral)

Persistence and degradability	In aerobic soils, dissipation is mainly due to microbial activity with the formation of metabolites by de-ethylation and hydroxylation, with eventual ring cleavage, and the formation of non-extractable residues (8-27% after 98d). Median DT50 (field) 17.4 (6.5-149, 9 sites). Adsorption on soils is medium KFoc 224 (162-333, 12), median KF 3.0 (0.3-25.2, 12 soils). Terbuthylazine is only slightly mobile. In water sediment systems, terbuthylazine dissipates with a DT50 of 33-73 d in the whole system.
Bioaccumulation potential	No data available
Mobility in soil	No data available

Simazine CAS No. 122-34-9	
Toxicity	
Birds Acute oral LD_{50} Dietary LC50 (8 day)	 >2000 mg/kg Mallard Ducks and Japanese quail 10 000 mg/kg Mallard Duck; > 5000 mg/kg Japanese quail
Aquatic Toxicity Fish static test LC_{50} (96 hr) Aquatic Toxicity Daphnia static test EC_{50} (48 hr) Algae Toxicity static test EC_{50} (72h) Bee Toxicity LD_{50}	90 mg/l Bluegill sunfish;> 100mg/l Rainbow Trout > 100 mg/l Daphnia magna (Water flea) 0.042 mg/l *Scenedesmus subspicatus* (green algae) >99 µg/bee (oral and contact)
Persistence and degradability	Microbial breakdown in soil results in degradation of simazine at very variable rates; DT50 is 27 to 102 days (median 49 days); temperature and soil moisture are the main factors affecting rates. Koc 103 to 277 (median 160); Kd 0.37 to 4.66 (12 soils). Is moderately persistent
Bioaccumulation potential	Low potential for bioaccumulation
Mobility in soil	Low mobility in soil

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product:

Keep out of drains, sewers, ditches, and waterways. Refer to container label for disposal information. Treat as hazardous waste and dispose of in accordance with local/ regional/ national/ international regulations.

Container:

Refer to container label for disposal information. Triple or pressure rinse empty containers. Pour rinse water into spray tank. Dispose of as hazardous waste. Do not contaminate water when disposing of rinse water. Dispose of using an approved waste disposal service provider. Follow all local/ regional/ national/ international regulations.

SECTION 14. TRANSPORT INFORMATION

UN Number	3082
UN proper shipping name	Environmentally Hazardous, Liquid, N.O.S. (Simazine 250g/l & Terbuthylazine 250 g/l).
Transport hazard class	9
Packaging group	III
Marine pollutant	Yes

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 8, 2019.

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.

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

SECTION 16. OTHER INFORMATION

Indication of changes:

Classification according to SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]

GHS aligned – all sections

Relevant H statements (number and full text):

H301-Toxic if swallowed

H311-Toxic in contact with skin

H314-Causes severe skin burns and eye damage

H317-May cause an allergic skin reaction

H331-Toxic if inhaled

H341-Suspected of causing genetic defects

H350-May cause cancer

STOT RE 2- Specific Target Organ Toxicity repeated exposure (Category 2) : May cause damage to organs through prolonged or repeated exposure.

Aquatic acute toxicity (Category 1): Very toxic to aquatic life

Aquatic chronic toxicity (Category 1): Very toxic to aquatic life with long lasting effects

Training instructions:

Use as indicated on the label, special training may be required for application.

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.

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.