

 ADAMA Listen • Learn • Deliver	MATERIAL SAFETY DATA SHEET	Revised edition no: 6
		Date: 06/09/2021
		Supersedes: 4/12/2020
BROMOTRIL® TERBU		

SECTION 1. Identification of the substance/mixture and of the company/undertaking

Trade name	: BROMOTRIL® TERBU
Substance name	: Bromoxynil (ISO): 3,5-dibromo-4-hydroxybenzonitrile Terbuthylazine: N2-tert-butyl-6-chloro-N4-ethyl-1,3,5-triazine-2,4-diamine
Relevant identified uses	: Herbicide.
Company identification	: ADAMA SOUTH AFRICA (PTY) LTD Ground Floor, Simeka House The Vineyards Office Estate 99 Jip de Jager Drive Bellville, 7530
Email	: SDS@ADAMA.COM
Emergency phone nr	: +27 82 446 8946 +2 86 155 5777 +27 21 982 1460

SECTION 2. Hazards identification

Human health hazards	: Harmful by inhalation and if swallowed. Irritating to eyes. May cause sensitization by skin contact. Possible risk of harm to the unborn child.
Environmental hazard	: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3. Composition/information on ingredients


Substance name	Concentration % w/w	CAS No	EC No	Index No	REACH Reg.	Classification
Bromoxynil (ISO)	: 16 - 21 %	1689-84-5	216-882-7	608-006-00-0	-----	Xn; R63 T+; R26 T; R25 R43 N; R50-53 (M fact. = 10)
Terbuthylazine	24-27 %	5915-41-3	227-637-9	-----	-----	N; R50-53
Ethylene Glycol	6-7 %	107-21-1	203-473-3	603-027-00-1	-----	Xn; R22

SECTION 4. First aid measures

First aid measures	
Inhalation	: Remove victim to fresh air. Keep person warm and at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin contact	: Take off immediately all contaminated clothing. Wash contaminated skin with soap and water. Get medical attention if symptoms occur.
Eye contact	: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. If irritation persists, get medical attention.
Ingestion	: Wash out mouth with water if person is conscious. Never give anything by mouth to an unconscious person. Get medical attention.

ADAMA SOUTH AFRICA (PTY) LTD

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Note to physician : No specific antidote. Treat symptomatically and supportively.

SECTION 5. Fire-fighting measures

- Suitable extinguishing media** : Use DRY chemicals, CO2, water spray or foam.
- Protection against fire** : Wear suitable protective clothing, gloves and eye/face protection. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Special procedures** : Exercise caution when fighting any chemical fire. In case of insufficient ventilation, wear suitable respiratory equipment.
- Hazardous decomposition products** : Bromine compounds , Nitrogen oxide and Cyanides

SECTION 6. Accidental release measures

- For emergency responders** : Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Dispose of this material and its container at hazardous or special waste collection points. Do not empty into drains. Do not discharge into the environment.
- Clean up methods** : Collect spilled material. Dispose of this material and its container at hazardous or special waste collection points.

SECTION 7. Handling and storage

- Handling** : When using do not eat, drink or smoke. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. After handling, always wash hands thoroughly with soap and water. Wash contaminated clothing before reusing. Comply with the safety instructions.
- Storage** : Keep only in the original container. Keep in a cool, well-ventilated place. Store away from direct sunlight. Keep away from food, drink and animal feedingstuffs.
- Precautions in handling and storage** : If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Technical protective measures** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of below established levels.

SECTION 8. Exposure controls/personal protection


Bromoxynil (ISO): Data not available.

Terbuthylazine: Data not available.

- Personal protection** : Ventilation is normally required when handling or using this product.
Ensure that eyewash station and safety shower is proximal to the work-station location.
- **Respiratory protection** : Respiratory protection is not required if good ventilation is maintained
 - **Hand protection** : Chemical resistant gloves ,
 - **Skin protection** : Wear suitable protective clothing.
 - **Eye protection** : Use safety goggles / Face shield.
 - **Others** : Chemicals resistant boots , Chemical resistant gloves.

SECTION 9. Physical and chemical properties

- Physical state at 20 °C** : Liquid

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Colour	: White
Odour	: Faint odor
pH value	: 4-6
Boiling point [°C]	: 100 (water)
Flammability	: Non-flammable.
Vapour pressure [mPa]	: 1.7 e-4 @ 25 °C (Bromoxynil (ISO)) 0.15 @ 25 °C (Terbutylazine)
Density [g/ml]	: 1.18 ± 0.02 @ 20°C
Solubility in water	: Miscible
Log P octanol / water at 20°C	: 1.04 (pH 7); (Bromoxynil (ISO)) 3.04 (Terbutylazine)
Explosive Properties	: Not explosive
Oxidising properties	: Not oxidizing

SECTION 10. Stability and reactivity


Stability	: Stable under recommended storage and handling conditions (see section 7).
Hazardous decomposition products to avoid	: Bromine compounds , Nitrogen oxide and Cyanides Materials : oxidizing agents , Acids , Alkali.

SECTION 11. Toxicological information

On product	
- Rat oral LD50 [mg/kg]	: 942
- LD50 Rabbit dermal [mg/kg]	: > 2,000
- Rat inhalation LC50 [mg/l/4h]	: 2.57
Dermal irritation (rabbit)	: Non-irritating
Eyes irritation (rabbit)	: Moderately irritating
Sensitization	: Moderate sensitizer
Mutagenicity	: Not mutagenic
Carcinogenicity	: Bromoxynil (ISO): : EPA Group C: Possible human carcinogen. EU : Not classified : Terbutylazine: : EPA: Group D EU : Not classified
Toxic for reproduction : Fertility	: Bromoxynil (ISO): Category 3
Toxic for reproduction	: Bromoxynil (ISO): Not teratogenic in animal experiments

SECTION 12. Ecological information

On product	
48 H-EC50 - Daphnia magna [mg/l]	: 47.2
72 H-EC50 - Algae [mg/l]	: 0.03
LD50 Birds [mg/kg]	: Bromoxynil (ISO): Bobwhite quail 217 Terbutylazine: Mallard duck & Bobwhite quail >1,000
Bees LC50 [µg/Bee]	: Not toxic to bees

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Persistence - degradability : **Bromoxynil (ISO): Soil** :
 : Half-life time = 7 days
 : The product is not persistent.
Terbuthylazine: Soil :
 : The product is persistent to some extent.
 : Adsorbed on organic matter and clay. Half-life time (t1/2) : 30-60 days
Mobility : **Bromoxynil (ISO): Soil** :
 : No risk of underground contamination.
Terbuthylazine: Soil :
 : Low mobility

SECTION 13. Disposal considerations

General : Dispose of in a pesticide approved landfill, or in a chemical incinerator equipped with scrubbers. Dispose in a safe manner in accordance with local/national regulations.

SECTION 14. Transport information

UN N° : 3082
- IMO-IMDG - class or division : 9
- IMDG-Marine pollution : Marine pollutant - Polluant marin
- Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bromoxynil (ISO), Terbuthylazine)
- IMO-IMDG - Packing group : III

SECTION 15. Regulatory information

EU Classification

Symbol(s) : According to Commission Directive 67/548/EEC, 1999/45/EC and its amendments



R Phrase(s) : Xn : Harmful. N : Dangerous for the environment.
 : R20/22- Harmful by inhalation and if swallowed.
 : R36 - Irritating to eyes.
 : R43 - May cause sensitization by skin contact.
 : R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 : R63 - Possible risk of harm to the unborn child.
S Phrase(s) : S02 - Keep out of the reach of children.
 : S13 - Keep away from food, drink and animal feedingstuffs.
 : S23D - Do not breathe spray.
 : S29/35- Do not empty into drains; dispose of this material and its container in a safe way.
 : S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
 : S46- If swallowed, seek medical advice immediately and show this container or label.
 : S57- Use appropriate containment to avoid environmental contamination.
 : S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.
 : S63- In case of accident by inhalation: remove casualty to fresh air and keep at rest.

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SECTION 16. Other information

List of relevant R phrases (heading 3) : R22 - Harmful if swallowed.

R25 - Toxic if swallowed.

R26 - Very toxic by inhalation.

R43 - May cause sensitization by skin contact.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63 - Possible risk of harm to the unborn child.

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