

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-hydroxybenzotrile
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
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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.

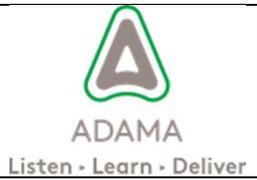
Skin contact : Take off immediately all contaminated clothing. Wash contaminated skin with soap and water. Get medical attention if symptoms occur.

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.

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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.

: Ventilation is normally required when handling or using this product.
Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal protection

- **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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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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