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BROMOTRIL T		H-0163

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

Trade name : BROMOTRIL T
Substance name : Bromoxynil (ISO): 3,5-dibromo-4-hydroxybenzoxynil
Terbutylazine: 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
21 Viben Street
Brackenfell 7560
Email : msds@mcw.co.il
Emergency phone nr : +27 82 331 6463
+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)
Terbutylazine	: 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.
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

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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
- 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 (Terbuthylazine)
- 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 (Terbuthylazine)
- Explosive Properties** : Not explosive
- Oxidising properties** : Not oxidizing

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SECTION 10. Stability and reactivity

- Stability** : Stable under recommended storage and handling conditions (see section 7).
Hazardous decomposition products : Bromine compounds , Nitrogen oxide and Cyanides
Materials to avoid : 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
: **Terbuthylazine:**
: 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
Terbuthylazine: Mallard duck & Bobwhite quail >1,000
Bees LC50 [µg/Bee] : Not toxic to bees
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

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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), Terbutylazine)
- IMO-IMDG - Packing group : III

SECTION 15. Regulatory information

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



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.

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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