

SAFETY DATA SHEET

BROMOTRIL T (150/333)

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

Product name : BROMOTRIL T (150/333)
Chemical name of active ingredient(s) : Bromoxynil (ISO): 3,5-Dibromo-4-hydroxybenzoxynil
 Terbutylazine:
 N2-tert-butyl-6-chloro-N4-ethyl-1,3,5-triazine-2,4-diamine
Manufacturer : Agan Chemical Manufacturers Ltd.
 Northern Industrial Zone,
 P.O.Box 262, Ashdod, Israel.
Emergency telephone number : +972-8-8515211

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Preparation

Information on hazardous ingredients *

Common name	CAS No.	%	EC Number	Symbol	R-Phrases
Bromoxynil (ISO)	1689-84-5	12 - 14	216-882-7	T+, N	R25-26-43-50/53--63
Terbutylazine	5915-41-3	27 - 30	227-637-9	Not classified	-

* *Occupational Exposure Limit(s), if available, are listed in section 8*

3. HAZARDS IDENTIFICATION

Most important hazards : Harmful by inhalation and if swallowed. Irritating to eyes. May cause sensitization by skin contact. Possible risk of harm to the unborn child.
 Toxic to aquatic organisms.

4. FIRST-AID MEASURES

Effects and symptoms

Inhalation : Harmful by inhalation.
Ingestion : Harmful if swallowed.
Skin contact : May cause sensitization by skin contact.
Eye contact : Irritating to eyes.

First-aid measures

: Remove victim from area of exposure. Wash off remaining material with plenty of water.
Inhalation : Remove victim to fresh air. If breathing is difficult: artificial respiration. Get medical attention.
Ingestion : Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
Skin contact : Remove contaminated clothing. Wash away remainder with water and soap.
Eye contact : Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention.

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Notes to a physician : There is no specific antidote. Treat symptomatically and give supportive therapy.
Protection of first-aiders : Use appropriate protection (see section 8).

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable : Dry chemical, water spray, foam, carbon dioxide.
Hazardous thermal (de)composition products : Bromine compounds, Chloride compounds, cyanide and nitrogen oxides.
Protection of fire-fighters : Self-contained breathing apparatus and total protection required in enclosed areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear suitable protective clothing.
Environmental precautions : Do not discharge into drains or the environment.
Methods for cleaning up : Keep away from: open flame, sparks and heat. Absorb remainder in sand or other inert material. Dispose of in an authorized waste collecting point.

7. HANDLING AND STORAGE

Handling : Avoid contact with skin and eyes. Ventilation required. Keep away from: sparks, open flame and direct sunlight.
Storage : Keep only in the original container. Keep in a cool, dry, well ventilated place away from direct sunlight.
Packaging materials
Suitable : High density polyethylene extrusion blow containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures : Ventilation required.
Hygiene measures : When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.
Occupational Exposure Limits
Common name : **Bromoxynil (ISO)**
: Not established
Common name : **Terbuthylazine**
: Not established
Personal protective equipment
Respiratory system : Respiratory protection is not required if good ventilation is maintained.
Skin and body : Wear suitable protective clothing. Chemical resistant boots.
Hands : Chemical resistant gloves.
Eyes : Safety goggles or face shield.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Colour	: White
Odour	: Faint odour
Boiling point	: 100°C (water)
Density	: 1.18 ± 0.02 g/mL @ 20°C
Vapour pressure	: < 1 mPa @ 20°C (Bromoxynil (ISO)) 0.15 mPa @ 25°C (Terbuthylazine)
Solubility in water	: 130 ppm @ 25°C (Bromoxynil (ISO)) 8.5 ppm @ 20°C (Terbuthylazine)
Octanol/water partition coefficient	: log < 2 (Bromoxynil (ISO)) log = 3.04 (Terbuthylazine)
pH	: 4 - 6 CIPAC, MT 75
Flammability	: Not flammable
Explosion properties	: Not explosive
Oxidation properties	: Not oxidizing

10. STABILITY AND REACTIVITY

Stability	: Not subject to polymerization.
Materials to avoid	: Oxidizing agents, acids and alkali.
Hazardous reactions	: None
Hazardous decomposition products	: Bromine compounds, Chloride compounds, cyanide and nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Preparation (similar formulation)

Acute toxicity - Oral	: LD ₅₀ (rat) = 942 mg/kg
Acute toxicity - Dermal	: LD ₅₀ (rabbit) > 2,000 mg/kg
Acute toxicity - Inhalation	: LC ₅₀ (rat) = 2.57 mg/L (4 hours)
Skin irritation	: Not irritating (rabbit)
Eye irritation	: Moderately irritating (rabbit)
Sensitization	: Moderate sensitizer (guinea-pig)
<u>Common name</u>	: Bromoxynil (ISO)
Chronic toxicity	: NOEL (mouse): 10 ppm or 1.3 mg/kg/day (1.5 years).
Carcinogenicity	: EPA : Group C EU : Not classified IARC : Not classified
Mutagenicity	: Not mutagenic
Reproduction toxicity	: Repr. Cat. 3 NOEL = 50 ppm or ~ 2 mg/kg/day. Retardation of development (bodyweight gain and eye opening) at parental toxic dose level.

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Other information : Teratogenicity - NOAEL (rat) Oral = 4 mg/kg/day (Developmental)
 NOAEL (rat) Dermal = 10 mg/kg/day (Developmental)
 Increased malformations in rat and rabbit at maternal toxic dose levels, variations and retardation below maternal toxic dose levels.

Common name : **Terbutylazine**

Chronic toxicity : NOEL (rat) = 0.22 mg/kg/day (2 years)
 NOEL (mouse) = 15.4 mg/kg/day (2 years)
 NOEL (dog) = 0.4 mg/kg/day (1 years)

Carcinogenicity : EPA : Group D
 EU : Not classified
 IARC : Not classified

Mutagenicity : Not mutagenic

12. ECOLOGICAL INFORMATION

Preparation

Ecotoxicity : **Fish**
 LC₅₀ (96 hours) rainbow trout = 13 mg/L
Daphnia magna
 EC₅₀ (48 hours) = 47.2 mg/L
Algae (scenedesmus subspicatus)
 EC₅₀ (72 hours) = 0.03 mg/L
Bees
 Oral and Contact LD₅₀ (48 hours) > 100 µg/bee

Very toxic to aquatic organisms. Not toxic to bees.

Common name : **Bromoxynil (ISO)**

Mobility : Soil - Mobile.
 K_{oc} = 108 - 239 mL/g
 No risk of underground water contamination.

Persistence/degradability : **Soil**
 The product is not persistent.
 Half-life time (t_{1/2}): < 1 day.
 Degradation is primarily via: hydrolysis and microorganisms.

Bioaccumulative potential : Low bioaccumulation potential.
 K_{ow} logP < 2

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13. DISPOSAL CONSIDERATIONS

Methods of disposal : Dispose of in a pesticide approved landfill, or in a chemical incinerator equipped with scrubbers, In accordance with national and regional regulations.

14. TRANSPORT INFORMATION

International transport regulations

UN number : 3082

Land - Road/Railway

Proper shipping name : Environmentally hazardous substance, Liquid, N.O.S., Bromoxynil (ISO), Terbutylazine.

ADR/RID Class : 9, M6, PG III

Hazard Identification Number : 90

Inland waterways

Proper shipping name : Environmentally hazardous substance, Liquid, N.O.S., Bromoxynil (ISO), Terbutylazine.

ADNR Class : 9, M6, PG III

Sea

Proper shipping name : Environmentally hazardous substance, Liquid, N.O.S., Bromoxynil (ISO), Terbutylazine.

IMDG Class : 9 + Marine Pollutant

Packing group : III

Emergency Schedules (EmS) : F-A, S-F

Air

Proper shipping name : Environmentally hazardous substance, Liquid, N.O.S., Bromoxynil (ISO), Terbutylazine.

UN/ID Number : 3082

IATA-DGR Class : 9, PG III

National transport regulations

No additional national transport regulations are known to the supplier

15. REGULATORY INFORMATION

Classification : According to EU Directives 67/548/EEC, 1999/45/EC.

Hazard symbol(s) : Xn, N



HARMFUL



DANGEROUS FOR THE ENVIRONMENT

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Risk phrases : R20/22: Harmful by inhalation and if swallowed.
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.

Safety phrases : S02: Keep out of the reach of children.
S13: Keep away from food, drink and animal feedingstuffs.
S20/21: When using do not eat, drink or smoke.
S23D: Do not breathe spray.
S24/25: Avoid contact with skin and eyes.
S35: This material and its container must be disposed of in a safe way.
S36/37: Wear suitable protective clothing and gloves.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S57: Use appropriate containment to avoid environmental contamination.
S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

HISTORY

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