



# MATERIAL SAFETY DATA SHEET

Page : 1 of 4

Revised edition no : 1

Date : 29 / 1 / 2008

Supersedes : 0 / 0 / 0

## TERBUTREX 50 SC

**H-0037 (36702)**

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

**Trade name** : TERBUTREX 50 SC  
**Chemical description** : Terbutryn : N2-tert-butyl-N4-ethyl-6-methylthio-1,3-5-triazine-2,4-diamine.  
**Use** : Herbicide.  
**Company identification** : Agan Chemical Manufacturers Ltd.  
P.O.B. 262  
ASHDOD Israel  
**Emergency phone nr** : +972-8-8515211  
**Email** : MSDS@ma-industries.com

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance name	Value(s)	CAS No	EC No	Index No	Classification
Terbutryn	45 - 50 %	886-50-0	212-950-5	-----	

### 3. HAZARDS IDENTIFICATION

**Human health hazards** : Harmful if swallowed.  
**Environmental hazard** : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 4. FIRST AID MEASURES

**First aid**  
**Inhalation** : Remove victim to fresh air. If breathing is difficult: artificial respiration . Get medical attention.  
**Ingestion** : Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.  
**Skin contact** : Remove contaminated clothing and shoes. Wash away remainder with plenty of water.  
**Eye contact** : Get medical attention. for at least 15 minutes. Wash out with plenty of water with the eyelid held wide open  
**Note to physician** : No specific antidote known. Treat symptomatically and give supportive therapy.  
**Protection of first-aiders** : Use appropriate protection (see section 8).

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media** : For small fire : dry chemical powder , water spray, carbon dioxide.  
For large fire : foam , water fog , water spray.  
**Hazardous decomposition products** : Sulfur oxides , nitrogen oxides (NO, NO2...) , carbon oxides (CO, CO2) .  
**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, gloves and eye/face protection.  
**Environmental precautions** : Do not empty into drains. Do not discharge into the environment.  
**After spillage and/or leakage** : Absorb in sand or other inert material. Collect spills and put it into appropriated container. Dispose of this material and its container at hazardous or special waste collection point.  
Keep away from combustible material.



# MATERIAL SAFETY DATA SHEET

Page : 2 of 4

Revised edition no : 1

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**H-0037 (36702)**

### 7. HANDLING AND STORAGE

- Handling** : Ventilation required.
- Storage** : Keep in original containers. Keep away from food, drink and animal feeding stuffs. Store in dry, well-ventilated area.
- Precautions in handling and storage** : Handle in accordance with good industrial hygiene and safety procedures.
- Storage - away from** : Direct sunlight .

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering measures** : Ventilation required.
- Industrial hygiene** : Wash hands thoroughly after handling. When using do not eat, drink or smoke. Wash clothing before re-using.
- Personal protection**
- **Respiratory protection** : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. .
  - **Skin protection** : Wear suitable protective clothing Wear safety boots.
  - **Hand protection** : Wear suitable gloves.
  - **Eye protection** : Chemical goggles or safety glasses.
- Occupational Exposure Limits**
- TLV** : Terbutryn : No data available.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid
- Colour** : White
- Odour** : Faint odour
- pH value** : 6-8
- Density [g/ml]** : 1.055± 0.02 @ 20°C
- Vapour pressure [mPa]** : 0.23@ 25°C (Terbutryn)
- Solubility in water** : Miscible.
- Flammability** : Not flammable
- Log P octanol / water** : 3.65 (Terbutryn)
- Explosion properties** : Not explosive
- Oxidation properties** : Not oxidizing

### 10. STABILITY AND REACTIVITY

- Stability** : Stable under normal conditions.
- Hazardous decomposition products** : Sulfur oxides , nitrogen oxides (NO, NO2...) , carbon oxides (CO, CO2) .
- Materials to avoid** : oxidizing agents , acids , alkali .

### 11. TOXICOLOGICAL INFORMATION

- On product**
- Rat oral LD50 [mg/kg]** : ~1,700
- Rat dermal LD50 [mg/kg]** : > 4,000
- Rat inhalation LC50 [mg/l/4h]** : >4.61 Maximum concentration attainable.
- Dermal irritation (rabbit)** : Not irritating .



# MATERIAL SAFETY DATA SHEET

Page : 3 of 4

Revised edition no : 1

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## TERBUTREX 50 SC

**H-0037 (36702)**

### 11. TOXICOLOGICAL INFORMATION (continued)

Eyes irritation (rabbit)	: Not irritating .
Chronic toxicity	: (Terbutryn): NOEL (rat)=300 ppm (2 years). (Terbutryn): NOEL (mouse)=3,000 ppm (2 years). (Terbutryn): NOEL (dog)=100 mg/kg/day (1 year).
Sensitization	: Non sensitizer
Carcinogenicity	: (Terbutryn): EPA Group C: Possible human carcinogen. EU , IARC : not classified.
Mutagenicity	: (Terbutryn): Not mutagenic.
Reproductive toxicity	: (Terbutryn): LOEL (rat)=150 mg/kg/day (3 generation).

### 12. ECOLOGICAL INFORMATION

Common name	: <b>Terbutryn</b>
96 H-LC50 - Bluegill sunfish [mg/l]	: =1.3
96 H-LC50 - Carp [mg/l]	: =1.4
96 H-LC50 - Rainbow trout [mg/l]	: =1.1
48 H-EC50 - Daphnia magna [mg/l]	: =2.66
EC50 7 d Algae [mg/l]	: =0.013
Birds LC50 [ppm]	: Bobwhite quail =5,000 (5 day feeding): Mallard duck >7,400
Birds LC50 [mg/kg]	: Mallard duck >4,640
Bees LD50 [µg/Bee]	: Oral > 225 Contact >100
Persistence and degradability	: <b>Soil :</b> : The product is not persistent . Degradation is primarily via: microorganisms . Half-life time (t1/2) 14-50 days. <b>: Water :</b> : Degradation is primarily via: microorganisms , photolysis . Adsorbs strongly to sediment .
Mobility	: Koc =2,000 ml/g <b>: Soil :</b> : Low mobility . Adsorbed on organic matter and clay.

### 13. DISPOSAL CONSIDERATIONS

Disposal	: 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.
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### 14. TRANSPORT INFORMATION

International transport regulations	
- UN No.	: 3082
- Proper shipping name	: Environmentally hazardous substance, liquid, N.O.S. (Terbutryn).
Land transport	
- H.I. nr :	: 90



# MATERIAL SAFETY DATA SHEET

Page : 4 of 4

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## TERBUTREX 50 SC

**H-0037 (36702)**

### 14. TRANSPORT INFORMATION (continued)

- ADR/RID : Class 9, M6, PG III
- Sea transport
- IMO-IMDG code : Class 9, PG III
- EMS-Nr : F-A, S-F
- Air transport
- IATA - Class or division : 9, PG III
- National transport regulations : No additional national regulations are available/required

### 15. REGULATORY INFORMATION

- EU Classification : According to Commission Directive 67/548/EEC and its amendments
- Symbol(s)



- : Harmful.  
Dangerous for the environment.
- R Phrase(s) : R22- Harmful if swallowed.  
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S Phrase(s) : S02 - Keep out of the reach of children.  
S13- Keep away from food, drink and animal feedingstuffs.  
S20- When using do not eat or drink.  
S29/35- Do not empty into drains; dispose of this material and its container in a safe way.  
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.

### 16. OTHER INFORMATION

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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