



# MATERIAL SAFETY DATA SHEET

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Revised edition no : 1

Date : 13 / 2 / 2008

Supersedes : 0 / 0 / 0

## TYLSIMEX 90 WG

**H-0058 (32017)**

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

**Trade name** : TYLSIMEX 90 WG  
**Chemical description** : Simazine: 6-chloro-N2-,N4-diethyl-1,3,5-triazine-2,4-diamine  
Tebuthylazine: N2-tert-butyl-6-chloro-N4-ethyl-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
Simazine	: 43 - 47 %	122-34-9	204-535-2	612-088-00-3	Carc. Cat. 3; R40 N; R50-53
Terbuthylazine	: 43 - 47 %	5915-41-3	227-637-9	-----	

### 3. HAZARDS IDENTIFICATION

**Human health hazards** : Limited evidence of a carcinogenic effect.  
**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** : Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention.  
**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** : Chloride compounds , 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** : Collect spills and put it into appropriated container. Dispose of this material and its



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### 6. ACCIDENTAL RELEASE MEASURES (continued)

container at hazardous or special waste collection point.  
Keep away from combustible material.

### 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** : Dust mask
  - **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** : Simazine: No data available.  
Terbutylazine: No data available.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Granules
- Colour** : Whitish
- Odour** : Faint odour
- Bulk density [g/cc]**
- Vapour pressure [mPa]** : 0.003 @ 25°C (Simazine)  
0.15 @ 25 °C (Terbutylazine)
- Solubility in water** : Miscible.
- Flammability** : Not flammable
- Log P octanol / water** : 2.19 (Simazine)  
3.04 (Terbutylazine)
- Explosion properties** : Not explosive
- Oxidation properties** : Not oxidizing

### 10. STABILITY AND REACTIVITY

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



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### 11. TOXICOLOGICAL INFORMATION

<b>On product</b>	<b>: Based on data of ingredients</b>
<b>Rat oral LD50 [mg/kg]</b>	: >2,000
<b>Rat dermal LD50 [mg/kg]</b>	: > 2,000
<b>Chronic toxicity</b>	: Simazine: NOEL (rat)=10 ppm (2 years). NOEL (mouse)=40 ppm Terbutylazine: NOEL (rat)=0.22 mg/kg/day (2 generations) NOEL (mouse)=15.4 mg/kg/day (2 years) NOEL (dog)=0.4 mg/kg/day
<b>Carcinogenicity</b>	: Simazine: EPA Group C: Possible human carcinogen. EU: Carc.Cat. 3 IARC classification: group 3 Terbutylazine: EPA: Group D EU , IARC : Not classified
<b>Mutagenicity</b>	: Simazine: Not mutagenic. Terbutylazine: Not mutagenic.
<b>Reproductive toxicity</b>	: Simazine: (2 generations) NOEL (rat)= 10 ppm (maternal) 500 ppm (fetal).
<b>Teratogenicity</b>	: Atrazine: NOEL (rat)=25 mg/kg/day

### 12. ECOLOGICAL INFORMATION

<b>Ecological effects information</b>	
<b>96 H-LC50 - Bluegill sunfish [mg/l]</b>	: (Simazine): 90 (Terbutylazine): 7.5
<b>96 H-LC50 - Rainbow trout [mg/l]</b>	: Simazine: >100 Terbutylazine: 3.8-4.6
<b>96 Hour - LC50- fish [mg/l]</b>	: Simazine: (Guppy)=4.56
<b>48 H-EC50 - Daphnia magna [mg/l]</b>	: (Simazine): >100 (Terbutylazine): 21.2
<b>72 H-EC50 Algae [mg/l]</b>	: (Simazine): 0.6 (Terbutylazine) : 0.016
<b>LD50 Birds [mg/kg]</b>	: (Simazine): Japanese quail >2,000 (Terbutylazine): Mallard duck >1,000
<b>Birds LC50 [ppm]</b>	: (Terbutylazine): (8 day feeding): Mallard duck >5,620
<b>Bees LD50 [µg/Bee]</b>	: (Simazine & Terbutylazine) : Oral & Contact > 100
<b>Persistence and degradability</b>	<b>: Simazine: Soil :</b> : Moderately persistent in soil Half-life time (t1/2) : 27-102 days. Degradation is primarily via: microorganisms. The product is not biodegradable <b>: Simazine: Water :</b> : Half-life time (t1/2) :96 days @ 20 °C Half-life time (t1/2) : (water/sediment)=68-166 days @ 20 °C <b>: Terbutylazine: Soil :</b> : The product is persistent to some extent. Adsorbed on organic matter and clay. Half-life time (t1/2) : 30-60 days Degradation is primarily via: microorganisms. <b>: Terbutylazine: Water :</b> : Half-life time (t1/2) : 86 days (pH 5)



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### 12. ECOLOGICAL INFORMATION (continued)

<b>Mobility</b>	Half-life time (t1/2) : 25 days (natural water) : <b>Simazine: Soil :</b> : Low mobility Koc 103-277 ml/g Kd 0.37-4.66 ml/g : <b>Terbutylazine: Soil :</b> : Low mobility Koc 162-278 ml/g Kd 2.5-25 ml/g
<b>Bioaccumulative potential</b>	: Terbutylazine: Low bioaccumulation potential Bioaccumulation in aquatic organisms is expected.

### 13. DISPOSAL CONSIDERATIONS

<b>Disposal</b>	: 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

<b>International transport regulations</b>	
- UN No.	: 3077
- Proper shipping name	: Environmentally hazardous substances, solid, N.O.S. (Simazine, Terbutylazine).
<b>Land transport</b>	
- H.I. nr :	: 90
- ADR/RID	: Class 9, M7, PG III
<b>Sea transport</b>	
- IMO-IMDG code	: Class 9, PG III
- EMS-Nr	: F-A, S-F
<b>Air transport</b>	
- IATA - Class or division	: 9, PG III
<b>National transport regulations</b>	: No additional national regulations are available/required

### 15. REGULATORY INFORMATION

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



	: Harmful. Dangerous for the environment.
<b>R Phrase(s)</b>	: R40 - Limited evidence of a carcinogenic effect. R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S Phrase(s)</b>	: S02 - Keep out of the reach of children. S13- Keep away from food, drink and animal feedingstuffs. S24/25 - Avoid contact with skin and eyes.



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#### 15. REGULATORY INFORMATION (continued)

S29/35- Do not empty into drains; dispose of this material and its container in a safe way.

S36/37- Wear suitable protective clothing and gloves.

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

##### Text of R-phrases in heading 2

: R40 - Limited evidence of a carcinogenic effect.

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

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