



MATERIAL SAFETY DATA SHEET

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Revised edition no : 0

Date : 3 / 1 / 2011

Supersedes : 0 / 0 / 0

COTORAN 4L

H-153-11113

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

Trade name : COTORAN 4L
Chemical description : Fluometuron: 1,1-dimethyl-3-a,a,a-trifluoro-m-tolyl)urea.
Use : Herbicide
Company identification : Agan Chemical Manufacturers Ltd.
P.O.B. 262
ASHDOD Israel
MSDS@ma-industries.com
Emergency phone nr : +972-8-8515211

2. 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.

3. Composition/information on ingredients

Substance name	Value(s)	CAS No	EC No	Index No	REACH Reg.	Classification
Fluometuron	: 41.7 %	2164-17-2	218-500-4	----	----	N; R50-53
Ethylene Glycol	: 8 - 9 %	107-21-1	203-473-3	603-027-00-1	----	Xn; R22

4. First aid measures

First aid
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.
Inhalation : Remove victim to fresh air. If breathing is difficult: artificial respiration . Get medical advice/attention if you feel unwell.
Note to physician : No specific antidote known.
Treat symptomatically and give supportive therapy.

5. Fire-fighting measures

Extinguishing media : For small fire : dry chemical powder , carbon dioxide
For large fire : foam , water fog , water spray.
Protection of fire-fighters : Use self-contained breathing apparatus and chemically protective clothing.
Hazardous decomposition products : carbon oxides (CO, CO₂) , nitrogen oxides (NO, NO₂...) , fluorine compounds .

6. Accidental release measures

Personal precautions : Wear suitable protective clothing, gloves and eye/face protection.

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6. Accidental release measures (continued)

- Environmental precautions** : Do not empty into drains Do not discharge into the environment.
- After spillage and/or leakage** : Collect spilled material. Absorb in sand or other inert material. Dispose of this material and its container at hazardous or special waste collection point.

7. Handling and storage

- Handling** : Ventilation required. Wash hands thoroughly after handling.
- 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.

8. Exposure controls/personal protection

- Industrial hygiene** : Wash hands thoroughly after handling. When using do not eat, drink or smoke. Wash clothing before re-using.

Substance name	Value(s)	CAS No	EC No	Index No	REACH Reg.	Classification
		107-21-1	203-473-3	603-027-00-1		Xn; R22

- 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** : Fluometuron: No data available.

9. Physical and chemical properties

- Physical state** : Liquid
- Colour** : Whitish
- Odour** : Faint odor
- pH value** : 7-8.5
- Boiling point [°C]** : 100°C (water)
- Density [g/ml]** : 1.16 ± 0.02 (20°C)
- Solubility in water** : Miscible
- Flash point [°C]** : 115 (Ethylene Glycol)
- Auto-ignition temperature [°C]** : 400 (Ethylene Glycol)
- Log P octanol / water** : 2.23 (Fluometuron)
- Flammability** : Non-flammable.
- Explosion properties** : Not explosive
- Oxidizing properties** : Not oxidizing

10. Stability and reactivity

- Hazardous decomposition products** : Nitrogen oxide , fluorine compounds

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10. Stability and reactivity (continued)

Materials to avoid : oxidizing agents , acids , alkali .
Conditions to avoid : All heat sources, including direct sunlight .

11. Toxicological information

On product
Oral, Rat LD50 [mg/kg] : 1,841
Dermal, Rabbit LD50 [mg/kg] : > 2020
Inhalation, Rat LC50 [mg/l/4h] : >2.38 (Maximum concentration attainable.)
Skin corrosion/ irritation : Not irritant
Serious eye damage/ irritation : Mildly irritating to the eyes.
Respiratory or skin sensitization : The product is not a skin sensitizer
Carcinogenicity : Fluometuron : Not classified
Germ cell mutagenicity : Fluometuron : Not mutagenic
Reproductive toxicity : Fluometuron : Not considered to be toxic for the reproductive system.

12. Ecological information

96 H-LC50 - Rainbow trout [mg/l] : 30
EC50 - Daphnia [mg/l] : 54
72H- EC50 - Algae [mg/l] : 0.16
LD50 Birds [mg/kg] : Bobwhite quail >2,150
Bees LD50 [µg/Bee] : Not toxic to bees
Persistence and degradability **Soil :**
: Moderately persistent in soil
Half-life time (t1/2) : 30 days
Mobility **Soil :**
: Moderately mobile

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.

14. Transport information

- **UN No.** : 3082
- **Proper shipping name** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluometuron)
- **Packing group** : III
- **Class** : 9

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14. Transport information (continued)

- H.I. nr : 90
- IMDG-Marine pollution : YES
Other : Not regulated by DOT.

15. Regulatory information

Symbol(s) : Xn: Harmful.
N: Dangerous for the environment.



R Phrase(s) : R22 - Harmful if swallowed.
R50/53 - Very 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.
S20/21 - When using, do not eat, drink or smoke.
S24/25 - Avoid contact with skin and eyes.
S36/37 - Wear suitable protective clothing and gloves.
S60 - This material and its container must be disposed of as hazardous waste.
S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. Other information

List of full text of R-phrases in section 3. : R22- Harmful if swallowed.

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