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

Trade name : AMIGAN
Substance name : Ametryn: N2-ethyl-N4-isopropyl-6-methylthio-1,3,5-triazine-2,4-diamine
Terbutryn : N2-tert-butyl-N4-ethyl-6-methylthio-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 : Irritating to eyes.
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
Ametryn (ISO)	: 38 - 42 %	834-12-8	212-634-7	613-010-00-0	----	Xn; R22 N; R50-53 (M fact. = 100)
Terbutryn	: 24 - 27 %	886-50-0	212-950-5	-----	----	N; R50-53

SECTION 4. First aid measures

First aid measures
Inhalation : Remove victim to fresh air. If breathing is difficult: artificial respiration . 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.
Ingestion : Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. 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).

SECTION 5. Fire-fighting measures

Suitable extinguishing media : For small fire : dry chemical powder , water spray carbon dioxide
For large fire : foam , water fog , water spray.
Protection against fire : Self-contained breathing apparatus and total protection required in enclosed areas.
Hazardous decomposition products : Sulfur oxides , nitrogen oxides (NO, NO2) , carbon oxides (CO, CO2) .

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SECTION 6. Accidental release measures

- For emergency responders** : Wear suitable protective clothing, gloves and eye/face protection.
- Environmental precautions** : Do not empty into drains Do not discharge into the environment.
- Clean up methods** : 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.

SECTION 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 .

SECTION 8. Exposure controls/personal protection

- : Ventilation required.
- Ametryn: Data not available.**
- Terbutryn : Data not available.**
- : Wash hands thoroughly after handling. When using do not eat, drink or smoke. Wash clothing before re-using.
- Personal protection**
- **Respiratory protection** : Dust mask
 - **Hand protection** : Wear suitable gloves.
 - **Skin protection** : Wear suitable protective clothing Wear safety boots.
 - **Eye protection** : Chemical goggles or safety glasses.

SECTION 9. Physical and chemical properties

- Physical state at 20 °C** : Granular solid.
- Colour** : Light brown
- Odour** : Faint odour
- pH value** : 8-11
- Flammability** : Not flammable
- Vapour pressure [mPa]** : 0.365 @ 25°C (Ametryn); 0.23@ 25°C (Terbutryn)
- Bulk density [g/cc]** : 0.46
- Solubility in water** : Dispersible
- Log P octanol / water at 20°C** : 2.63 (Ametryn); 3.65 (Terbutryn)
- Explosive Properties** : Not explosive
- Oxidising properties** : Not oxidizing

SECTION 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 .

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SECTION 11. Toxicological information

On product

- Rat oral LD50 [mg/kg]	: >2,500
- Dermal, Rat LD50 [mg/kg]	: >2,000
- Rat inhalation LC50 [mg/l/4h]	: >5.9
Dermal irritation (rabbit)	: Not irritant
Eyes irritation (rabbit)	: Moderately irritating
Sensitization	: Non sensitizer
Mutagenicity	: Not mutagenic
Carcinogenicity	: Terbutryn: EPA Group C: Possible human carcinogen. Ametryn: EPA , EU : not classified.
Toxic for reproduction : Fertility	: Not considered to be toxic for the reproductive system.
Toxic for reproduction	: Not teratogenic in animal experiments

SECTION 12. Ecological information

On product

LC50 96 Hour - fish [mg/l]	: Poecilia reticulata=3.58
48 H-EC50 - Daphnia magna [mg/l]	: Ametryn: 28; Terbutryn: 2.66
EC50 7 d Algae [mg/l]	: Ametryn: 0.0036 ; Terbutryn: 0.013
Bees LD50 [µg]	: Not toxic to bees
Persistence - degradability	: Soil : : The product is not persistent . Half-life time (t1/2) ~60 days (Ametryn); 14-50 days (Terbutryn) : Terbutryn: Water : : Adsorbs strongly to sediment . The product is persistent to some extent. Half-life time (t1/2) :30-60 days
Mobility	: Terbutryn: Soil : : Low mobility . Adsorbed on organic matter and clay.

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.
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SECTION 14. Transport information

UN N°	: 3077
Proper shipping name	: UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Ametryn, Terbutryn), 9, III
- H.I. no	: 90
- IMO-IMDG - class or division	: 9
- Packing group	: III
- IMDG-Marine pollution	: Yes

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SECTION 15. Regulatory information

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

Symbol(s)



R Phrase(s)

Xi: Xi : Irritant
 N: N : Dangerous for the environment.
 R36 - Irritating to eyes.
 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.
 S29/35- Do not empty into drains; dispose of this material and its container in a safe way.
 S39- Wear 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.

SECTION 16. Other information

List of relevant R phrases (heading 3) : R22 - Harmful if swallowed.
 R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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