MATERIAL SAFETY DATA SHEET

AMETRYN 500 SC

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Ametryn 500SC
Use: A selective suspension concentrate herbicide
Manufacturer:

SHANGHAI TNEGONG AGROCHEM CO., LTD.
Phone Numbers
Tel: 86-21 5506 3225
Fax: 86-21-5506 3699

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: Ametryn
Chemical name: N2-ethyl-N4-isopropyl-6-methylthioi-1,3,5-triazine-2,4-diamine
CAS N°: 834-12-8
Chemical family: 1,3,5-triazine
Chemical formula: $C_9H_{17}N_5S$ (Mol. Wt.: 227.3).
Formulation: Ametryn 500 g/L suspension concentrate

3. HAZARD IDENTIFICATION

May be harmful is swallowed and/or on skin contact.
Product is non flammable.
Ingestion: Moderately toxic, no significant effects are expected to develop if only small amounts are swallowed.
Mildly irritating to the upper respiratory tract.
Mildly irritating to the eyes. May cause pain, redness or tears to the eyes.

4. FIRST-AID MEASURES

No signs and symptoms of triazine poisoning are known or expected in humans. An antidote is neither known nor needed. Treat symptomatically when required. When large amounts have been ingested, gastric lavage or the administration of activated charcoal with water may be indicated.

Inhalation

Remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration. Keep person warm at rest. Obtain medical advice immediately

Skin contact

Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap.

Seek medical advice if necessary.

Eye contact

Flush eyes with gently flowing cold water or saline solution for 20 minutes, holding the eyelid(s) open. If irritation persists, obtain medical attention.

Ingestion

Put patient in half up-right position, give plenty of water. To limit toxicant absorbtion, 30 g activated charcoal in 100 ml of water may be administered. Never give anything by mouth to a semi-conscious or unconscious person. Have victim rinse mouth thoroughly with water. Do not induce vomiting. Maintain blood pressure and airway. Give oxygen if respiration is depressed. In serious cases, seek medical advice immediately.

Advice to physician

No signs and symptoms of triazine poisoning are known or expected in humans. An antidote is neither known nor needed. Treat symptomatically when required. When large amounts have been ingested, gastric lavage or the administration of activated charcoal with water may be indicated. In cases of very heavy ingestion, some formulants may lead to complications, eg. gastric irritation from dispersing/wetting agents in powders, or dire emergency from alkylglycols in liquid products. Data on constituents should be obtained from the manufacturers, and treatment carried out accordingly.

5. FIRE-FIGHTING MEASURES

Fire/explosion hazards

Fire may produce irritating or poisonous vapours (toxic oxides of nitrogen, sulphur and carbon) mists. Keep fire exposed containers cool by spraying with water.

Extinguishing media

Extinguish small fires with carbon dioxide, dry powder, water spray, fog or standard foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Firefighting

Remove spectators from surrounding area. Remove container from fire area if possible. Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid inhaling hazardous vapours. Keep unwind.

Fire fighting protective equipment

Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with skin and eyes. Do not breathe in fumes. For personal protection

see Section 8.

Environmental precautions

Do not allow to enter drains or water courses. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations.

Methods for cleaning up

Do not touch spilled material; stop leak if you can, do it without risk. Use water spray to reduce vapours. For small spills: sweep up with damp earth or sand or other suitable non-combustible absorbent material, such as sawdust, taking care not to raise a dust cloud. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away and upwind. Large spills: dike far ahead of spill for later disposal. Land spills: dig a pit, pond, lagoon or holding area to contain the liquid. Keep unnecessary people away.

7. HANDLING AND STORAGE

Handling

Harmful by inhalation. Avoid contact with eyes and skin and inhalation of fumes. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking or using the toilet. Operators should change and wash clothing daily. Remove contaminated clothing immediately. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage

Store in its original container in isolated, dry, and well-ventilated area. Avoid cross contamination with other pesticides and fertilizers. Keep under lock and key out of reach of unauthorized persons, children and animals. Store away from incompatible substances. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROL/ PERSONAL PROTECTION

Occupation exposure limits

No occupational limits established by OSHA, ACGIH or NIOSH

Engineering measures

It is essential to provide adequate ventilation. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal protective equipment

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal equipment including approved respiratory protection.

Respiratory system

An approved full-face respirator suitable for protection from dust and mists of pesticides is required. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

Clothing

Employee must wear appropriate protective (impervious) clothing and equipment to prevent skin contact with the substance.

Gloves

Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection

Employee must wear splash-proof safety goggles and face-shield to prevent contact with this substance.

Emergency eye wash

Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Fine white to off-white powder
Odour: Slight odour
Flammability: Not flammable
Explosive properties: Non explosive
Flash point: No flash point – water base formulation
Oxidising properties: Not corrosive
pH: 5.44 in 5 % water
Relative density: Bulk density 0.6 g/ml at 20 ºC
Persistent foaming: No information currently available
Storage stability: Stable for up to 2 years under normal warehouse andfield conditions
Suspensibility: 86 % of the active ingredient remain in suspension in distilled water and 84 % in standard hard water.
Solubility in water: 200 mg/ L at 20 ºC of the active ingredient
Solubility in organic solvents: acetone 610 g/L, methanol 510 g/L , toluene 470 g/L
Partition-coefficient in n-octanol/water: $\log K_{OW}$ = 2.63 at 25 ºC (data for 500 SC)
Melting point: 84–86 ºC

10. STABILITY AND REACTIVITY

Stability

The product is stable at room temperature. Product hydrolysed rapidly in strong alkaline and acid media. The product slowly decomposes by UV light, but this effect is of negligible value under field conditions. Do not freeze the product.

Incompatibility

The product is compatible with most other common pesticides but incompatible with strong alkaline and acid materials. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.

Hazardous decomposition

Product undergoes decomposition at high temperatures. Avoid heating above ambient temperature. Oxides of carbon, phosphorus and sulfur are released when the product decomposes on heating.

11. TOXICOLOGICAL INFORMATION

Acute oral LD 50: 2220 mg/kg in rats.
Acute dermal LD 50: >5000 mg/kg in rats.
Acute inhalation LC50 (4 h) >4.4 mg/L of air in rats.
Acute skin irritation: This product is classified as non-irritant and noncorrosive.
Acute eye irritation: This product is classified as mildly irritant to the eyes.
Dermal sensitisation: Not a sensitizer.

Carcinogenicity: Studies did not detect carcinogenic activity. Human data inadquate.
Teratogenicity / Reproductive hazard: No data currently available
Mutagenicity: Studies indicate that the product did not display mutagenic activity

12. ECOLOGICAL INFORMATION

Degradability

Strongly adsorbed to soil. Half-life in soil is between 70 and 250 days,

Mobility

The product is relatively mobile in soils and due to its persistence in soil it may leach as a result of high rainfall, floods and furrow irrigation. Ametryn can therefore cause contamination of surface and ground water.

Accumulation

This product shows little or no tendency to bioaccumulate and poses no long term threat to wildlife. Ametryn is broken down into no-toxic substances by tolerant plants.

13. ECOTOXICOLOGY

Birds: Slightly toxic to birds
Fish: Moderately toxic to fish and highly toxic to shellfish
Daphnia: Slightly toxic to Daphnia magna
Bees: Slightly toxic to bees
Earthworms: LC50 (14 days) is 166 mg/kg of soil (Data on the technical product)
Soil micro-organisms: No information currently available

14. DISPOSAL CONSIDERATIONS

Pesticide disposal

Contaminated absorbents, used containers, surplus product, etc., should be burnt in an incinerator preferably designed for pesticide disposal. Hydrolysis is under alkaline conditions (10 % w/v sodium hydroxide) is a suitable method to dispose of small quantities of ametryn. Heating speeds up the process. After hydrolysis, dilute and dispose of via the sewage system. Ametryn is relatively stable and characterised by high mobility in some soils and should not be buried in dump sites, landfills, etc.

Comply with local legislation applying to waste disposal.

Package product wastes

Emptied containers retain vapour and product residues. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed. Combustible containers should be disposed of in pesticide incinerators. Non-combustible containers must first be triple-rinsed with water. Containers that are in good condition may be returned to the manufacturer, or to a drum reconditioner for reuse with the same type of pesticide product. Containers that are not to be re-used should be punctured and transported to a scrap metal facility for recycling or disposal. Comply with any local legislation applying to disposal.

15. TRANSPORT INFORMATION

UN number: 2998
ADR/IRD: Not Regulated
AIR/IATA: Not Regulated
IMG/IMO: Not Regulated
ADNR: Not available
UK Not available
TREMCARD NO: Not regulated No 2.

16. REGULATORY INFORMATION

Symbol : Xn,
Indication of danger: Environmentally dangerous substance, irritant.
Risk phases : R22 Harmful if swallowed.
Safety phases: S2 Keep out of reach of children.
S36 Wear suitable protective clothing.

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.
If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.
Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.