



CURE CHEM INDIA

The Chemical People

A-85, 1ST FLOOR, MASOODPUR MAIN ROAD, VASANT KUNJ, NEW DELHI-110070 (INDIA)
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MATERIAL SAFETY DATA SHEET AMITRAZ 200 EC

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: AMITRAZ 200 EC

Chemical name: N-methyl bis (2, 4-xylyliminomethyl) amine

Product Use: Insecticide/Acaricide

Manufacturer: CURE CHEM INDIA

Address: A-85, 1ST FLOOR, MASOODPUR MAIN ROAD, VASANT KUNJ, NEW DELHI-110070 (INDIA)

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Nature: This product is formulated.

| Components | CAS number | Concentration % | Molecular Formula |
|-----------------------------|------------|-----------------|--|
| Amitraz | 33089-61-1 | 200 g/l | C ₁₉ H ₂₃ N ₃ |
| Inert ingredients + solvent | N/A | 800g/l | N/A |

Ingredients or impurities contributing to hazard: the product has aromatic solvent as solvent in the formulation. The other compounds of the formulation are not classified as hazardous.

3. HAZARDS IDENTIFICATION

Main hazards: the product may be toxic to men and to the environment if not used as recommended.

Product Effects:

Adverse health effects to human: Amitraz is a Central Nervous System depressor and when there is systemic absorption, it causes capillary vasodilation.

Environmental Effects: the product is toxic to aquatic organisms, earthworms and may cause their death.

Physicochemical hazards: flammable product 1B.

Specific hazards: there are no other hazards related to the product.

Main Symptoms: the product may cause hypotension, brachycardia, hypothermia, ataxia, depression and in more serious case, coma. Due to the presence of aromatic solvent, it may occur nausea, vomiting, diarrhoea, chronic headache, dizziness, sedation and in-coordination.

4. FIRST AID MEASURES



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First Aid Measures: remove to fresh air. Remove all contaminated clothing and wash the affected parts of the body thoroughly with plenty of water during 30 minutes. If victim is unconscious and not breathing, apply artificial respiration or oxygenation. The victim must be taken to the nearest medical care center, along with this material safety data sheet.

Inhalation: remove to fresh air. If the victim stops breathing, apply artificial respiration. If breathing is difficult, immediately call a physician.

Skin contact: immediately wash with water during 30 minutes after removing contaminated clothing. In case of effects/symptoms, call a physician. Wash the contaminated clothing prior to reuse them and dispose contaminated shoes.

Eye contact: immediately rinse with plenty of running water for at least 30 minutes. Call a physician.

Ingestion: do not induce vomiting, but do not stop if it happens spontaneously. Call a physician immediately. **WARNING:** never give anything by mouth to an unconscious person.

Actions to be avoided: do not apply mouth to mouth respiration if the patient has swollen the product. Give artificial respiration.

Protection for the first aid givers: avoid skin or inhalation contact with the product during the process.

Notes for the physician: no specific antidote is available. If large amounts were swallowed, gastric emptying procedures as gastric lavage may be performed, taking great care to avoid pulmonary aspiration due to the risk of chemical pneumonitis. Activated charcoal and saline laxatives may be administered due to probable active ingredients adsorption to activated charcoal.

Symptomatic treatment must include, specially, support measures as the correction of hydro electrolytic and metabolic disorders, as well as respiratory aid. The management of hepatic and renal functions must be kept. If in eye, rinse them with physiological saline followed by occlusion and lead to ophthalmic evaluation.

5. FIRE FIGHTING MEASURES

Extinguishing media: foam, CO₂, dry chemical and, in last case, water.

Special Procedures: wear appropriate PPE (personal protective equipment) to avoid direct contact with the product. PVC overall, rubber gloves and rubber boots are recommended. Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: wear waterproof overalls, safety goggles, rubber boots and nitril rubber, latex or PVC gloves. Respiratory protection must be used depending on the concentrations in the environment or on the extension of the spill/release. In this case, choose self-contained breathing apparatus.

Removal of ignition sources: stop electric energy and turn off the sources that may produce sparks. Remove all the material that may start a fire (for example: spilled diesel oil).



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Dust control: not applicable as it is a liquid.

Inhalation, skin, mucous membrane and eyes contact prevention: wear the garments and accessories described above.

Environmental precautions: avoid contamination of surface waters sealing the entrance of the rain water galleries (culverts). Do not allow the residues of released product reach water collections, building dikes with earth, sand or any other absorbing material.

Cleaning methods: stop and collect the spill with non-combustible absorbing materials (e.g. sand, earth, vermiculite, diatoms earth). Put the residues into a recipient for disposal according to the local regulations. Clean, preferably with a detergent; avoid using solvents.

Secondary hazards prevention: do not allow the product contaminates creeks, lakes, water fountains, wells, sewers, pluvial sewers and effluents.

7. HANDLING AND STORAGE

Handling: Technical measures: wear PPE as described on item 8. Keep people, and specially children and domestic animals away from the place of work. Do not have direct contact with the product.

Avoid leaks or contamination of the application equipment, during its supply.

Workers exposure prevention: wear PPE as described on item 8. Do not eat, drink or smoke during product handling. When opening a packaging, do it in a way to avoid leaks.

Do not use damaged and/or defective personal protective and application equipment. Do not unstop nozzles, holes, tubulations or valves of application equipment with the mouth.

Do not manipulate and/or carry damaged packaging.

Safe handling precautions: wear PPE as described on item 8. Do not apply the product in the hottest hours of day, against or in the presence of strong winds, in a way to avoid its drift.

Guidance to a safe handling: wear PPE as described on item 8. Handle the product with appropriate local exhaustion or in a well ventilated area. If handled in open environments, do it in the same direction as of wind. Apply only the manufacturer's recommended dose. In case of intoxication symptoms, immediately stop the work and proceed as described on item 4 of this sheet.

Storage:

Appropriate technical measures: keep the product in its original recipient. Keep eventual residues of the product in its original packaging, appropriately closed.

Storage conditions

Appropriate: keep the recipient appropriately closed, at room temperature and protected from light. Keep it in a duly identified, exclusive place for toxic products.

Lock the place to avoid the access of unauthorized persons and children.

Avoid: humid places and places with sources of heat.

Incompatible products and materials: do not store with food, beverages, including those intended for animal use.

Safe materials for packaging: Recommended: product already packed in an appropriate packaging see section 16.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION



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Engineering controls: whenever applicable use ventilators, air circulators, exhausters appropriate for flammable gases and vapours; provide the work area with appropriate ventilation. The operator must always use breathing protection equipment, even when there is good and natural or mechanical ventilation.

Specific control parameters: Occupational exposure limits:

| Common name | Exp. Limit | Type | Effect |
|---------------------|------------------------------|---------|------------|
| Amitraz | None established | TLV/TWA | N/A |
| (Xylene) Solvent | 78ppm(340mg/m ³) | LT | |
| | 100ppm | TLV-TWA | irritation |
| | 150ppm | TLV-TWA | irritation |

Personal protective equipment:

Breathing protection: wear rubber or silicone masks with chemical filter for pesticides combined with mechanical filter for class P2 particles.

Hands protection: wear nitril rubber PVC, latex or other waterproof and tear/perforation resistant material gloves.

Eye protection: wear safety goggles for chemical products.

Skin and body protection: wear long sleeve waterproof or hydro-repellent overalls and PVC boots.

Special Precautions: keep PPE duly clean and in adequate use conditions, performing inspections and possible maintenance and/or substitution of damaged/defective equipment and parts from time to time.

Hygiene measures: take shower and change the clothing after using the product. Wash contaminated clothing separately, avoiding its contact with another personal use tools.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid

Colour: yellowish to amber

Odour: characteristic

pH: 6.5 – 7.5 at 20⁰C

Boiling point: not applicable

Melting point: not applicable as it is liquid.

Flash point: 23 at 27⁰C

Upper/Lower explosion limits: the product is not explosive

Density: 0.940 to 0.950 g/mL at 20⁰C

Solubility: emulsifiable in water.

Viscosity: 10 cps at 25⁰C



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10. STABILITY AND REACTIVITY

Chemical stability: the product is stable under normal temperature and storage conditions.

Hazardous reactions: there is no hazardous reaction known.

Hazardous decomposition products: fire produces carbon monoxide, carbon dioxide, nitrous oxide and other non-identifiable organic substances.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral LD50 in rats: 1,900 mg/kg

Dermal LD50 in rats: > 12,000 mg/kg

Local Effects:

Skin irritation in rabbits: the product is considered moderately irritating.

Eyes irritation in rabbits: the product is considered none irritating

Sensitization: the product caused medium to strong intensity reactions in 100% of used animals.

Chronic toxicity:

Mutagenicity: the product is considered non-mutagenic.

Carcinogenicity: the active ingredient is considered non-carcinogenic.

Teratogenicity: the active ingredient is considered non-teratogenic.

Reproductive effects: the active ingredient is considered as having no reproductive effect.

12. ECOLOGICAL INFORMATION

Environmental, behavioural effects and impact of the product:

Mobility: Amitraz is moderately movable in sandy-clay, medium texture and in clay and it is very movable in sandy soil.

Persistence/Degradability: Amitraz is rapidly degraded (half-life in soil: 20 minutes to 1 (one) day. Degradation occurs through hydrolysis, photo-degradation and microbial degradation (aerobic and anaerobic).

Bioaccumulation: there is no indication that Amitraz accumulates in mammals.

Ecotoxicological information:

Toxicity to fishes :(*Brachydanio rerio*) LC50 (96hs) = 0.014 mg/L

Toxicity to birds: Mallard ducks: LC50 (8 days): 7,000 mg/Kg

Toxicity to earthworms: (*Eisenia foetida*) LC50 (14 days) = 7.46 mg/Kg

Toxicity to algae: (*Chlorella vulgaris*) EC50 (96hs) = 62.16 mg/L

Toxicity to micro crustaceous :(*Daphnia similis*) EC50 (48hs) = 0.32ppm

13. DISPOSAL CONSIDERATIONS

Treatment and disposal methods:

Product: inactivate the product through incineration in ovens designed to this kind of operation, equipped with chambers to wash effluent gases that are according to the competent authority regulations.



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Product residues: keep eventual residues of the products and/or products with expiration date expired in their original packaging, duly closed.

Used packaging: empty packaging must be submitted to triple washing and then stored in the safe place to be returned to the shop where they were acquired within one year. Do not burn, nor bury the packaging. The specific State and Municipal legislation must be obeyed. The State or Municipal environmental agency must be consulted.

14. TRANSPORTATION INFORMATION

(ADR) Classification UN number (Ground transport) 1993

Proper shipping name: Flammable liquid, N.E. (Xylene)

Class: 3

Hazard number: 30

Packaging group: III

Special provision: 102, 109

Quantity Limits

(Excepted quantity:

NA

IATA Classification UN number: (Air Transport) 1993

Proper shipping name: Flammable liquid, N.E. (Xylene)

Class: 3

Hazard number: 30

Packaging group: III

Passenger aircraft: Packaging instructions: 309 Max. Quantity per packaging: 60 L As limited quantity, Packaging Instructions: Y309 Max. Quantity per packaging 10 L

Cargo aircraft: Packaging instructions: 310 Max. Quantity per packaging: 220 L

Special provision: NA

I.M.O. Classification UN number: (Maritime Transport) 1993

Proper shipping name: Flammable liquid, N.E. (Xylene)

IMO Class: 3.3

IMDG Page: 3126, 3230, 3345

EmS number: 3-07

MFAG Table: NA

Marine Pollutant: Marine Pollutant

Class: 3

Hazard number: 30

Packaging group: III

Ground Transportation: EMA regulations under Environmental and Natural resources management (Hazardous Substance, Pesticides and Others Toxic Substances) (Amendment) Regulations, 2011(No.2) CAP 20:27

Air Transportation: IATA (International Air Transport Association, Dangerous Goods Regulations).

Maritime Transportation: I.M.O. (International Maritime Dangerous Goods Code) NA: Not applicable



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15. REGULATORY INFORMATION

Regulations: Information on risk and safety according to the label: Avoid environmental contamination – Preserve the Nature.

Do not use leaking equipment. Apply only the manufacturer's recommended doses.

Do not wash packaging or application equipment in lakes, fountains, rivers and other water courses.

Discard the packaging and residues of the product correctly. Follow the instructions contained in the item of Disposal Considerations.

16. OTHER INFORMATION

Packing and Labelling:

Packed in 100ml, 200ml, and 1liter fluorinated-high density polyethylene plastic containers and labelled according to the **Zimbabwe-Statutory Instrument 144 of 2012, Pesticides Regulations, 2012 (CAP. 18: 12) and Pesticides (Amendment) Regulations 2013 (No.1)**

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or nonstandard uses of the product or where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof. We recommend that matters which are to do with application rates and pests' controlled careful and thorough reading of the product label must be done.