



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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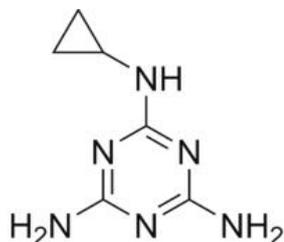
1. Chemical Product Identification

Product Name: Cyromazine 75% WP

Molecular Formula: C₆H₁₀N₆

Molecular Weight: 166.2 g/mol

Structural Formula:



Chemical Name: N-cyclopropyl-1,3,5-triazine-2,4,6-triamine

Form: WP

Color: White

Odor: Sweet, musty odour

CAS No.: 66215-27-8

2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Cyromazine	66215-27-8	75.0
Other ingredients	--	25.0



3. Hazards Identification

Eye: Direct contact with the product may cause moderate eye irritation.

Skin: Direct contact with the product may cause moderate skin irritation. Not a skin sensitizer.

Ingestion: Harmful. Large ingestions can cause nausea, vomiting, abdominal distress and diarrhoea.

Inhalation: Harmful. Inhalation of the dust may be irritating to the nose, throat and upper respiratory tract.

4. First Aid Measures

Contact with eyes: Flush the eyes immediately with gently flowing lukewarm water for at least 20 minutes. Hold eyelids apart to rinse the entire surface of the eyes and lids. Do not apply any medicating agents except on advice of a physician. If irritation persists, seek medical advice.

Contact with skin: Move the victim to fresh air and remove all contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash affected skin areas gently and thoroughly with water and non-abrasive soap. Do not rub the skin. If irritation persists, seek medical advice. Persons who become sensitized may require specialized medical management. Wash contaminated clothing thoroughly.

Ingestion: Seek medical advice immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If person is conscious administer 30 to 60 g activated charcoal in 150 to 300 ml water.

Inhalation: Move the victim to fresh air or remove source of contamination. Monitor for respiratory distress. Administer oxygen or artificial respiration if needed. Seek medical attention if necessary.

Advice to physician: No specific antidotes are available. If a large amount of Cyromazine has been ingested and if copious vomiting has not already occurred, the stomach must be emptied and steps taken to limit gastrointestinal absorption. If the patient is fully alert and nervous system depression is not anticipated, oral administration of Syrup of Ipecac is probably the best way to empty the stomach.

Caution: Observe the victim closely after administering Ipecac. If consciousness level declines, or if vomiting has not occurred in 15 minutes, proceed to intubate, aspirate and lavage the stomach with isotonic saline or sodium bicarbonate solution.



Following emesis, have the victim drink a suspension of activated charcoal in water to limit toxicant absorption.

5. Fire-Fighting Measures

Fire hazard and explosion hazard: Not flammable. Avoid heat or flame. Slight dust explosion hazard when exposed to heat or flame.

Extinguishing media: Extinguish fires with carbon dioxide, dry chemical or alcohol-resistant foam. Avoid water coming in contact with the product.

Fire-fighting: Fight fire from maximum distance or use unmanned hose holder or monitor nozzles. Remove container from fire area if possible and without risk. Dyke fire control water for later disposal.

Do not scatter the material. Avoid pollution of waterways. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep upwind. Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Personal protective equipment: Fire fighters and others that may be exposed should wear full chemical protective clothing and self-contained breathing apparatus. See section 8 for recommendations regarding Exposure Controls/Personal Protection. Fire may produce irritating or poisonous vapours of combustion.

Procedures: Transfer spilled material to suitable containers for recovery or disposal. Keep dust to a minimum. Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

6. Accidental Release Measures

Personal precautions: Do not breathe in dusts or fumes. Avoid contact with skin and eyes. For personal protection see Section 8 and see section 4 regarding First Aid Measures when exposed to material during clean-up operations. Environmental precautions: Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill: For small dry spills, sweep up with damp earth or sand or other suitable absorbent and taking care not to raise a dust cloud. Place the material into a clean, dry container and cover for subsequent disposal. All contaminated cleaning



materials should be placed in closable receptacles with clear label. 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.

7. Handling and Storage

Handling: Wear appropriate protective equipment when handling the product. Do not handle material near food, feed or drinking water. Avoid contact with eyes, prolonged contact with skin, and inhalation of dust and vapour. Use with adequate ventilation to control dust and reduce exposure to vapours. Protect all equipment from explosions. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. 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. Local regulations should be complied with.

Storage: Store the product in its original labelled container in cool, dry, well-ventilated area, away from heat, sparks and other sources of ignition. No smoking is allowed. Protect the product from temperatures below 0°C and above 35°C. Do not store next to food, feed and water supplies. Keep out of reach of unauthorized persons, children and animals. Avoid breaking the containers, spillage or leaks. Comply with the local regulations.

8. Exposure Controls/Personal Protection

Provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator: Wear an approved full-face respirator suitable for protection from dusts and mists of pesticides is required. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

Clothing: Wear appropriate chemical-resistant protective clothing or other impervious clothing. Wear boots, hat and equipment to prevent repeated or prolonged skin contact



with this substance. Do not wear leather clothing. Wash clothing after use.

Gloves: Wear appropriate chemical-resistant protective gloves whenever the product is handled to prevent contact with this substance.

Eye protection: Use safety goggles and face-shield, which is compatible with respiratory equipment.

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

9. Physical and Chemical Properties

Appearance: Powder

Color: white

Odour: Odourless

Moisture content: $\leq 3.0\%$

Wetting time: ≤ 60 s

Suspensibility: $\geq 70\%$

Fineness (through 44 μ m sieve): $\geq 98\%$

pH: 6.0-9.0

10. Stability and Reactivity

Stability: Considered stable in unopened original packages, under normal, dry storage conditions.

Incompatibility: Not compatible with Endosulfan and Lufenuron.

Hazardous polymerization: Product will not undergo polymerisation.

Hazardous decomposition products: None known.

11. Toxicological Information

Acute oral LD₅₀: 4516 mg/kg in rats (calculated).

Acute dermal LD₅₀: > 4000 mg/kg in rats (calculated).

Acute inhalation LC₅₀: > 2.5 mg/l in rats for 4 hours.

Dermal sensitization: Not a skin sensitizer in guinea pigs.

Skin irritation: Cause a moderate irritation on skin of rabbits.

Eye irritation: Mild irritant to rabbit eyes.



Carcinogenicity: No evidence of carcinogenicity was observed.

Mutagenicity: No evidence of mutagenicity was observed.

Teratogenicity: No evidence of teratogenicity was observed.

Acceptable Daily Intake(ADI): 0.02 mg/kg bw/day. (JMPR, 1990).

12. Ecological And Ecotoxicological Information

Degradability: In rats, Cyromazine is efficiently excreted, mainly as the parent compound.

Cyromazine is rapidly metabolized in plants. The principle metabolite is melamine.

Laboratory and field studies demonstrate that Cyromazine is efficiently degraded by biological mechanisms.

Degrades moderately to slowly in aerobic soil in the light. $t_{50} = 260$ days. Degrades more rapidly under aerobic and anaerobic conditions in the dark. $t_{50} = 2$ to 3 months.

Mobility: In soil and environment, Cyromazine and its main metabolite, melamine is classified as high to low mobile, depending on the type of soils. $K_{oc} = 79$ to 1784.

Bio-accumulation: Negligible. $BCF = <1X$, whole fish.

ECOTOXICOLOGY:

Birds: slightly toxic

LD50: Bobwhite quail: 1785 mg/kg

Japanese quail: 2338 mg/kg

Mallard duck: 2510 mg/kg

Fish: slightly toxic

96 h LC50: Rainbow Trout: > 100 mg/l

Bluegill sunfish: > 90 mg/l

Carp: > 100 mg/l

Honeybees: Non-toxic to adult honeybees.

No contact action up to $5 \mu\text{g}/\text{bee}$.

Daphnia: LC50 (48 h): > 9.1 mg/l

Moderately toxic to aquatic invertebrates.

13. Disposal Considerations

Pesticide disposal: Open dumping or burning of this pesticide is prohibited Waste resulting from the use of this product cannot be reused or reprocessed. Do not



contaminate rivers, dams or any other water sources with the product or used containers. Package product wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards. Empty the container of excess product into the container of the applicator. Destroy the emptied containers by perforation and flattening. Bury in an approved dump site. Do not re-use the empty container for any other purpose.

14. Transport information

UN number: UN3077

Hazard Class: 9

Packaging group: III

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s

15. Regulatory Information

Symbol: Xn

Indication of danger: Harmful substance.

Risk phrases:

R20/22: Harmful by inhalation and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

R52: Harmful to aquatic organisms.

Safety phrases:

S1/2: Keep locked up and out of the reach of children.

S24/25: Avoid contact with skin and eyes.

S36//37/39: Wear suitable protective clothing, gloves and eye/face protection.

S61: Avoid release to the environment. Refer to safety data sheet.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is



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properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.