

SAFETY DATA SHEET

Gemini[®] SC

Date of Issue: 14 August 2009

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Chemical name of active ingredient(s): Clofentezine
Recommended use: Miticide
Supplier: Elliott Technologies Ltd
PO Box 838
Pukekohe
Emergency telephone number: 0800 Poison (0800 764 766) 24 Hours

2. HAZARDS IDENTIFICATION

Hazard Classification: 6.9B, 9.3C
Required identification Details: TOXIC IF INGESTED
TOXIC TO TERRESTRIAL ANIMALS

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Clofentezine	74115-24-5	42%

4. FIRST-AID MEASURES

Description of necessary first aid measures:

Effects and symptoms
First-aid measures A slight skin and eye irritant. No other acute effects are known in normal use. Avoid contact with skin, eyes or clothing.

Inhalation: No specific health effects are known.

Ingestion: No specific health effects are known.

Skin contact: May be a slight skin irritant. A weak skin sensitizer in animal studies.

Eye contact: A slight eye irritant.

Notes to a physician: Apply symptomatic treatment

Workplace facilities:

5. FIRE-FIGHTING MEASURES

HAZCHEM Code:	2W
Extinguishing media :	Water, foam, dry powder or carbon dioxide.
Hazardous thermal (de)composition products:	Evolution of toxic fumes which may include nitrogen oxides and hydrogen chloride.
Protection of fire-fighters:	Do not breathe fumes. Wear self-contained breathing apparatus. Spray containers with water to keep cool.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use proper protective equipment to minimize exposure.
Environmental precautions:	Take all necessary action to prevent and to remedy the adverse effects of the spill. Notify the appropriate authorities immediately. Ensure that the disposal is in compliance with regional requirements and state local requirements.
Methods for cleaning up:	Contain and absorb spillage with absorptive material. Use clean shovel and place into clean, dry containers for disposal. Wash area with detergent and water. Do not allow spilled material to enter sewer or watercourse.

7. HANDLING AND STORAGE

Handling:	Keep away from naked flame.
Storage:	Store in original container tightly closed in a locked, dry, well ventilated place away from food and feedstuffs. Keep away from sparks, heat and flames. Keep out of reach of children or animals. Hazardous Substance and New Organisms Act (1996) requires schedule 3 & 4 products in containers less than 5 litres to be stored 1.5 metres above ground level.
Packaging materials:	Plastic containers (Fluorinated HDPE)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Guidelines

Workplace exposure standards:	Not established
Application in the workplace:	Not established
Exposure Standards outside the workplace:	

Engineering measures

Hierarchy of controls:

Exposure control measures:

Engineering controls are not necessary under most routine uses and handling conditions. For precautions, use with adequate ventilation. Local exhaust ventilation may be necessary when used in a confined area.

No Hazard indication:

Ventilation specification:

Personal Protective Equipment

Detail specifications for equipment:

No special requirements.

Respiratory system:

Ensure good ventilation and work up-wind. If not possible wear suitable respirator for spray mist.

Skin and body:

Long-sleeved shirt and long pants, shoes or boots plus socks.

Hands:

Chemical-resistant gloves such as barrier laminate, butyl rubber, polyvinyl chloride (PVC) or Viton recommended.

Eyes:

Goggles, safety glasses.

General hygiene:

Wash hands and face after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Viscous purplish-red liquid.

Colour:

Purplish-red.

Odour:

Odourless

pH:

n/a

Vapour Pressure:

1.3 x 10⁽⁻⁷⁾ Pa@25° C a.i.

Vapour Density:

Boiling Point:

Not available

Freezing/melting point:

Not available

Solubility:

Disperses in water

Specific gravity or density:

1.18 kg/litre

Information for flammable material including:

Not flammable

- **Lower and upper flammability limits**
- **Flashpoint (state test Method)**

Auto-ignition Temperature:

n/a

Octanol/water partition coefficient:

Not available

Explosion properties:

n/a

Oxidation properties:

n/a

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions
Conditions to avoid: Excessive heat and cold
Materials to avoid: Oxidising agents

Hazardous decomposition Products: Evolution of toxic fumes in a fire which may include nitrogen oxides and hydrogen chloride.

Hazardous polymerization: Will not occur
Specific Data: n/a

Hazardous reactions : None known

11. TOXICOLOGICAL INFORMATION

Acute toxicity – Oral : Oral LD50 (rat): >5,000 mg/kg (low toxicity)
Acute toxicity - Dermal : Dermal LD50 (rabbit): >2,400 mg/kg (low toxicity)

Acute toxicity – Inhalation: Inhalation LC50 (rat): not determined. (Apollo SC proved to be too viscous for generation of an aerosol; risk of inhalation exposure is minimal).

Skin irritation : A mild skin irritant.

Eye irritation: A slight eye irritant

Sensitization : Not a sensitiser

Common name :

Chronic toxicity : The studies below were carried out with the Clofentezine Technical (96%).

Carcinogenicity: Clofentezine showed no adverse effect in a 115-week feeding study with rats at a low dose levels of clofentezine. At the highest test dose of 400 ppm, treated rats had increased liver weight and male rats showed a slight increase in incidence of thyroid follicular cell tumors; the latter, however is an indirect effect caused by stimulation of TSH hormone and is unlikely to occur in humans. EPA has interpreted this animal study result and places Clofentezine Technical in carcinogenicity Category C, a possible human carcinogen under chronic exposure to extreme experimental dose. Similarly, in feeding studies with mice (105 weeks) and dogs (52 weeks), effects on organ weights were only observed at the highest test dose: female mice (5,000 ppm), increased liver weight, dogs (20,000 ppm), moderate liver toxicity, slight increases in adrenal weights (males) and thyroid weights (females).

Mutagenicity: **CARCINOGENICITY:** NTP: No; IARC: No; OSHA: No
Clofentezine was not mutagenic or genotoxic when tested in the Ames gene mutation assay and four other mutagenesis systems.

Reproduction toxicity:

In a three-generation study in rats, clofentezine showed no adverse effects on fertility or reproductive performance at dose levels up to 400 ppm.

Other information :

TERATOGENICITY (BIRTH DEFECTS)

Clofentezine demonstrated no teratogenetic effects in foetuses of rats and rabbits given up to 3200 mg/kg/day and 3000 mg/kg/day, respectively.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS

DO NOT apply to abodies of water. DO NOT contaminate sewers, drains, dams, creeks or any other waterways with product or empty container.

Ecotoxicity:

Fish – Rainbow Trout, Bluegill

**Birds - Mallard Duck,
- Bobwhite Quail**

Bees

No toxic effect at maximum achievable concentration in water.

Acute oral LD₅₀ >3000 mg/kg

Acute oral LD₅₀ >7500 mg/kg

Acute oral LD₅₀ >20ug/bee, Contact LC₅₀ > 1500 ppm, stable to light and air, on hydrolysis (22° C) half-life DT₅₀ 248hr (pH5), 34hr (pH7) and 4 hr (pH 9).

**Mobility Soil
Water**

Not available

Not available

13. DISPOSAL CONSIDERATIONS

Methods of disposal :

Wastes resulting from the use of this product mat be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent) then burn if permitted and circumstances, especially wind direction permit.

14. TRANSPORT INFORMATION

International transport regulations

International transport regulations:

UN number:

This material is not a dangerous good as defined by the International Maritime Dangerous Goods Code and the International Air Transport Dangerous Goods Regulations.

Land - Road/Railway

Proper shipping name :

n/a

15. REGULATORY INFORMATION

ACVM Registered Number:

P3318

HSNO Approval Code:

HSR000775

16. OTHER INFORMATION

Additional information:

Disclaimer

Trademarks