MATERIAL SAFETY DATA SHEET
VERTEX 50 % SC

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD
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IDENTIFICATION OF THE PRODUCT:

Trade name:	**VERTEX 50 % SC**
Uses:	**miticide**
Type of formulation:	**Suspension concentrate (SC)**
Common name:	**Clofentezine**
Chemical name:	**3,6-bis(2-chlorophenyl)-1,2,4,5-tetrazine.**
Empirical formula:	**$C_{14}H_8CL_2N_4$**

COMPOSITION OF PRODUCT:

Active ingredient:

Clofentezine	**50% w/v**	**[74115-24-5]**

Inert ingredient: **up to 100%**

HAZARD IDENTIFICATION:

GHS classification:
Hazardous to aquatic environment – long term
GHS Signal Words:
None

HazardStatements :
H411 Toxic to aquatic life with long lasting effects.

General Precautionary Statements :
P102 Keep out of reach of children
P103 Read label before use.

Pictograms :

Precautionary statements Prevention:
No specific requirements.

Precautionary statements Response:
No specific requirements**.**

Storage :
No specific requirements**.**

Disposal:
P501 Dispose of contents/container to an approved waste disposal plant.

Other information :
No other information**.**
Hazardous substance according to SWA criteria.

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FIRST AID MEASURES:

If inhaled:
Remove sources of contamination or move victim to fresh air and keep at rest.
If breathing is irregular or stopped, administer artificial respiration. If breathing discomfort persists, contact a Poisons Information Centre or a doctor.

In case of skin contact:
Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watch bands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

In case of eye contact:
Check and carefully remove any contact lenses if easy to do so, if easy to do so Protect unharmed eye. Rinse eyes immediately with clean water for at least 15 minutes. Keep eye wide open while rinsing. If irritation occurs and persists, contact a Poisons Information Centre or a doctor.

If swallowed: DO NOT induce vomiting. Clean mouth with water. Give plenty of water to drink. Obtain medical attention.

First Aid facilities Ensure eye wash and safety shower are available.

Medical Attention: Treat symptomatically.

FIRE-FIGHTING MEASURES:

Extinguishing media Use extinguishing media suited to burning materials.

Hazard from combustion products
The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both) fire gases. Will emit noxious and toxic fumes.

Precautions for fighting fires

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Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire residues and contaminated fire extinguishing water in accordance with local regulations. Do not release contaminated water into the environment.

Hazchem Code Not established

ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment. Keep people and animals away. Ensure adequate ventilation. Contain spill and absorb with earth, sand, clay or other absorbent material. Prevent spilled material from entering drains or watercourses. Collect and store in properly labelled drums for safe disposal. Clean floor with a damp cloth and place it in the drum. Seal drums and label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc is unavoidable warn the local water authority.

HANDLING AND STORAGE:

Handling Keep out of reach of children. Do not inhale spray mist. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves and contaminated clothing.

Storage Store in the closed original container in a cool well ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room away from children, animals, food, animal feed, seed and fertilisers.

EXPOSURE CONTROL/ PERSONAL PROTECTION:

Exposure Standards

TWA (mg/m3)	STEL (mg/m3)
Not set	Not set

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Exposure limits have not been established by SWA for any of the significant ingredients in this product Exposure standard – **Time Weighted Average (TWA**) means the average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day working week.

Short Term Exposure Limit (STEL) means the exposure level that may be equalled (but should not be exceeded for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL

Biological Limit Values
None allocated

Engineering Controls
Control process conditions to avoid contact. Use in a well ventilated area only.
If natural ventilation is inadequate, use of a fan is recommended.

Personal Protective Equipment
Eyes: Safety goggles. Eye wash bottle with pure water. Clothing: Impervious overalls buttoned to the neck and wrists and a washable hat.
Gloves: Polyvinyl alcohol or nitrile-butyl-rubber gloves. Before removing gloves clean them with soap and water. Respiratory: If inhalation is likely an AS/NZS 1715/1716 approved respirator should be worn.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance, Odour and Colour: Bright pink suspension liquid

Specific Gravity: 1.15 – 1.25

pH : 6.7 – 7.7

Melting Point: Not applicable

Solubility (water): Disperses in water

Flash Point: >120.5OC

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Boiling Point: No data available

Vapour Pressure: No data

Vapour Density: No data

Percent Volatiles: No data

Flammability Limits: UFL: Not determined

LFL: Not determined

Autoignition Temperature: 334OC

Partition co-efficient, noctanol/ water : 3.1

Oxidising properties: Not an oxidizer

STABILITY AND REACTIVITY:

Chemical stability: Stable under normal conditions of use and storage.

Conditions to avoid: Avoid heat, flame and sparks

Incompatible materials : No known incompatibilities.

Hazardous decomposition products:
Hazardous and toxic gases may be given off when exposed to extreme heat or fire. Combustion forms carbon monoxide, carbon dioxide, and possibly smoke. May form oxides of nitrogen. Carbon monoxide poisoning produced headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgement, and unconsciousness followed by coma and death.
Hazardous reactions: Stable under recommended storage conditions. No decomposition or hazardous polymerisation reactions if used as directed.

TOXICOLOGICAL INFORMATION:

Inhalation : Unlikely to cause inhalation toxicity. May irritate mucous membranes of the nose and mouth.
Skin contact: Not irritating to the skin.
Eye contact: Not irritating to the eyes
Ingestion: This product is poisonous if swallowed.

Chronic toxicity:
Mutagenicity: Not mutagenic.
Teratogenicity: Not classified
Reproductive effects: Not classified
Carcinogenicity: No significant ingredient is classified as carcinogenic by SWA, NTP or IARC
Organ toxicity: No data available

Acute toxicity:
Oral toxicity (product): LD50 rat >5,000 mg/kg
Dermal toxicity (product): LD50 rat >5,000 mg/kg
Sensitisation: Not a skin sensitizer.

ECOLOGICAL INFORMATION:

Ecotoxicity: Clofentezine:
Birds Oral LD50((Mallard duck) >3,000 mg/kg

Fish toxicity: LC50 (96 hr) (rainbow trout) >20 mg/L

Algae: EC50 (72 hr) (Seleastrum capricomutum) >80 mg/L

Daphnia : EC50 (48 hr) (Daphnia magna) >200 mg/L

Environmental fate, persistence and degradability,
Abiotic degradation in water DT50 : 9.6 Soil DT50 : 63.8 days Not readily biodegradable

mobility Partition co-efficient, n-octanol/water : 3.1 Bioconcentration factor (BCF) : 248 Mobility in soil : Koc = 1064 (Low mobility in soil)

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Identified harmful effects on environment:

This product is a marine pollutant for sea transport. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms.

Other precautions: Do not contaminate dams, waterways or sewers with this product.

DISPOSAL CONSIDERATIONS

This product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used containers. Triple or preferable pressure rinse containers before disposal. Add rinsings to the mixing tank. Do not dispose of undiluted chemical onsite. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

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