

Material Safety Data Sheet

Clethodim 24% EC

1. Chemical Product and Company Identification

MSDS Name:

Clethodim 24% EC

Company Identification: SHANGHAI TNEGLONG AGROCHEM CO., LTD.

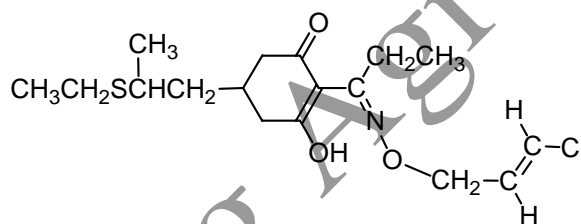
For information, call: +86-21-5506 3225

Emergency Number: +86-21-5506 3699

2. Composition, Information on Ingredients

COMPONENT	CAS NO.	% W/V
Clethodim	99129-21-2	24%
Emulsifiers	Confidential	
Hydrocarbon solvent	64742-94-5	To 100

Structural formula:



Molecular formula: C₁₇H₂₆ClNO₃S

Molecular Weight: 359.9

Chemical Abstracts name:

(*E,E*)-(\pm)-2-[1-[[3-(3-chloro-2-propenyloxy)imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-yl]oxy]propyl]-3-hydroxy-2-cyclohexen-1-one

IUPAC name

(\pm)-2-[[*E*]-1-[[*E*]-3-chloroallyloxyimino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxycyclohex-2-en-1-one

3. Hazards Identification

Risk phrases: R20 Harmful by inhalation.

R22 Harmful if swallowed.

R65 Harmful-may cause lung damage if swallowed.

Safety phrases: S20/21 When using do not eat or drink/smoke.

S24/25 Avoid contact with skin/eyes.

S29/35 Do not empty into drains/Dispose of material and container in a safe way.

SUSDP Classification: S5

UN Number: 3082



4. First Aid Measures

Skin contact: Remove contaminated clothing. Wash contaminated skin with soapy water. If skin irritation develops, get medical attention. Wash clothing thoroughly before re-use.

Eye contact: Rinse eye(s) with clean running water for 15 minutes. Get medical attention.

Ingestion: Rinse mouth. Give water to drink if patient is conscious. DO NOT induce vomiting. If vomiting occurs ensure patient can breathe, then give water to drink. Get medical attention.

Advice to doctor: No specific antidote is known. Treat symptomatically. Main hazard is solvent entering lungs-may lead to chemicalpneumonitis.

5. Fire Fighting Measures

Suitable extinguishing media: Carbon dioxide, dry chemical, foam, water fog. Unsuitable extinguishing media: Water stream.

Special hazards in fire: Product is flammable. Combustion may release carbon dioxide, nitrogen oxides, and/or chlorine compounds.

Required special protective equipment for fire-fighters: Wear self contained breathing apparatus if in enclosed space.

6. Accidental Release Measures

Emergency procedures: Wear protective equipment to prevent skin and eyes being affected. Evacuate unprotected and unnecessary personnel from area of spill. If material is leaking from a container, stop the leak only if this can be done safely. Prevent spillage entering drains or watercourse.

Methods for containment & cleanup: Vermiculite, Sand, Soil is a suitable absorbent, especially soils high in clay.

Soil can be used to form bunds to contain spillage.

Contaminated soil should be collected for disposal at a suitable landfill.

Contaminated area and tools should be washed down with hypochlorite bleach.

Personal protective equipment and clothing should be washed with soapy water.

7. Handling and Storage

Handling: Keep away from food, drink, and animal feedstuff.

KEEP OUT OF REACH OF CHILDREN.

Wear suitable Personal protective equipment when handling and spraying.

Storage: Store in the original container in a dry, cool, ventilated, LOCKED area.

DO NOT store in prolonged sunlight.

DO NOT store with food, seed, or animal feedstuff.

8. Exposure Controls, Personal Protection

Engineering measures: Use assisted ventilation in enclosed spaces if needed, especially storage areas.

Personal protection equipment: When opening the container, preparing spray and using the prepared spray wear safety goggles, impervious gloves, cotton overalls buttoned to the neck and wrist, and boots.

9. Physical and Chemical Properties

Appearance: Light brown liquid.

Odour: Slight petroleum smell.

pH: Not applicable to product. Is slightly acid as ready to spray emulsion.

Vapour pressure: Not determined.

Vapour density: Not determined.

Boiling point/range: > 100 °C.

Melting/freezing point: < 0°C

Solubility: Not soluble as such, but is fully emulsifiable.

Specific gravity - density: 0.95 ± 0.01

Flashpoint: Not determined.

Explosive limits (air): Not determined.

Ignition temperature: Not determined.

10. Stability and Reactivity

Chemical stability: Normally stable. Active may degrade in strong UV light.

Conditions to avoid: Very high or low temperatures.

Materials to avoid: Strong oxidising agents.

Hazardous decomposition products: Oxides of nitrogen and chlorine. Burning with limited oxygen may produce carbon monoxide.

Hazardous reactions: Not known. Does not polymerise.

11. Toxicological Information

Acute toxicity: Clethodim LD₅₀ 1360 mg/kg female rat.

Chronic toxicity: NOEL is 300 ppm of diet for quail.

Possible routes of exposure: Inhalation of spray mist is the most likely cause of exposure.

Range of effects. Excessive exposure may affect human health as follows:

Skin contact: Mildly irritating.

Eye contact: Will cause moderate irritation. Vision may be impaired, and effects may last for some weeks.

Inhalation/ingestion: Ingestion is likely to cause nausea, gastrointestinal irritation, vomiting and diarrhoea. May enter lungs directly or from vomit. Inhalation may result in throat and lung irritation. Symptoms may include coughing, difficult breathing, soreness, and nasal discharge.

Dose/conc./conditions likely to cause injury: Ingestion of 10 ml or more is likely to be serious.

Delayed effects if any: Chronic studies have shown decreased body weight, increased liver size, and anaemia.

Relevant negative data: Not known to be carcinogenic, teratogenic, or mutagenic.

12. Ecological Information

Ecotoxicity:

48hr LC₅₀ (Daphnia magna): 20.2mg/L

96hr LC₅₀ (rainbow trout): 18-56mg/L

96hr LC₅₀ (bluegill sunfish): 33mg/L

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Add: Yangpu building 24B, No.2005, Huangxing Road, Yangpu Shanghai

Persistence/degradation: Does not persist in soil. Half life varies with soil type and moisture status, but is generally a matter of weeks rather than months.

Mobility: Not readily leached.

13. Disposal Considerations

Product: Whenever possible, product should be used for its intended purpose, even if reclaimed from spillage (reclaimed product must be uncontaminated).

Containers: Whenever possible, follow directions given on container. If not available, triple or pressure rinse plastic or metal containers before disposal. Recycle containers if possible (replace cap and return clean containers to recycler or designated collection point). Treat rinsings as for product above. 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 500 mm 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.

Sewage: Do not dispose of product or rinsings into sewage systems or septic tanks.

14. Transport Information

Transport Information: It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

U.N. Number: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (Clethodim, 24%EC)

IMDG Class: 9

Packing Group: II

15. Regulatory Information

Risk phrases: R20 Harmful by inhalation.

R22 Harmful if swallowed.

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16. Additional Information

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.