

**SAFE DATA SHEET**

Last revised June 2024

**CLEVER 360**

## SAFETY DATA SHEET

**Section 1: IDENTIFICATION****1.1 Identifiers**Product Name: **Clever 360**

360 g/L Clethodim EC

CHEMICAL NAME: 2-[(1E)-1-[[[(2E)-3-chloro-2-propen-1-yl]oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

CAS NUMBER: 99129-21-2

**1.2 Recommended use of the chemical and restrictions on use**

USE: A selective post-emergent herbicide for grass weed control in broadleaf crops and forestry

**1.3 Supplier contact details**

Company: AGSTAR NEW ZEALAND LIMIED

Address: 4 Putakitaki Street Lincoln, 7608

Telephone: +64 27 483 9756

Email: [john@agstar.co.nz](mailto:john@agstar.co.nz)

24 hour emergency contact: 0800 CHEMCALL (0800 243622)

National Poisons Centre: 0800 POISON (0800 764766)

**Section 2: HAZARDS IDENTIFICATION****2.1 Hazardous Classification**

Product is classified as hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020 of the HSNO Act, 1996, HSR100921

HSNO Classification	Hazard Statement
3.1D	Flammable Liquid (Cat.4)
6.1E	Acute Toxicity (Oral Cat.5); Aspiration Hazard (Cat.1)
6.3A	Skin Irritation (Cat.2)
6.4A	Eye Irritation (Cat.2)
6.9B	Target Organ Systemic Toxicity (oral Cat.2)
9.1C	Harmful to aquatic organisms (Cat.4)
9.2A	Soil Ecotoxicity
9.3C	Harmful to terrestrial vertebrates

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#### 2.2 Label elements

Pictogram:



**Signal word:** WARNING

**Hazard Statements:**

Combustible Liquid

May be harmful if swallowed

May be harmful if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

May cause damage to organs through prolonged or repeated exposure

Harmful to aquatic organisms

Very toxic to the soil environment

Harmful to terrestrial vertebrates

**Prevention Statements:**

**Prevention**

Keep out of reach of children.

Read label before use.

Keep away from flames and hot surfaces.

No smoking.

Avoid contact with eyes and skin.

Do not breathe in the vapour or spray mist.

Wash hands thoroughly after use.

When mixing or applying, wear personal protection as described in section 8.

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Take off contaminated clothing and wash before reuse.

Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area.

Do not apply directly into or onto water.

**Response**

First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs)

Storage statements:

Dispose of product and containers in accordance with local Regulations.

Additional Label Requirements:

Do not apply into or onto water.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredients	Content g/L	CAS NO
Clethodim	360	99129-21-2
Other non-hazardous ingredients	To Balance	-

**Section 4 - FIRST AID MEASURES****4.1 Description of first aid measures**

General Information: For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to mouth. Obtain medical attention.

**Eye Contact**

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Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists.

**Skin Contact**

Wash with plenty of soap and water. Seek medical advice if irritation occurs

**Inhalation**

Seek medical advice if feeling unwell

**Ingestion**

Do NOT induce vomiting. Call the Poisons Centre on 0800 POISON (0800 764 766), or a Doctor immediately

**4.2 Symptoms caused by exposure**

Unlikely to cause harmful effects under normal conditions of handling and use.

**4.3 Medical attention and special treatment**

Treat symptomatically.

**Section 5 - FIRE FIGHTING MEASURES**

**5.1 Flammability**

Non-flammable

**5.2 Suitable Extinguishing media:**

Water spray, foam, dry chemical, CO<sub>2</sub>.

**5.3 Specific hazards arising from the chemical**

No data available.

**5.4 Special protective equipment and precaution for fire fighters**

Full protective clothing and self-contained breathing apparatus.

**5.5 Hazchem Code:**

3Z

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing (overalls buttoned at wrist and neck), chemical resistant gloves and boots and chemical goggles or face shield.

**6.2 Environmental precautions**

Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.

**6.3 Method and materials for containment and cleaning up**

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Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to a suitable landfill.

**Section 7 - HANDLING AND STORAGE****7.1 Precautions for Handling**

Read label before use. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Wash hands thoroughly after handling. For personal protection see section 8.

**7.2 Conditions for safe storage**

Keep out of reach of children. Keep container tightly closed when not in use. Store in secure, cool, well-ventilated area away from foodstuffs, seeds, fertilisers and human/animal health products. Storage must be in accordance with the current version NZS 8409 Management of Agrichemicals.

**Section 8 - EXPOSURE CONTROLS / PPE****8.1 Control parameters – exposure standards, biological monitoring****Exposure Limit:**

No exposure standard has been established for this product

**8.2 Engineering Controls**

Select spray application equipment to minimize exposure to operator and bystanders

**8.3 Personal Protection**

Safety glasses. Synthetic apron. Gloves (impervious). Wear suitable protective clothing. Chemical resistant boots. Respirator is recommended.

**Section 9 - PHYSICAL/CHEMICAL PROPERTIES**

Appearance: Amber liquid

Odour: Odourless

PH:3.0-7.0 (as aqueous emulsion)

Melting Point: Not available

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Boiling Point: No data available

Flash Point: 63°C

Flammability (Solid, gas): Not applicable

Upper/lower flammability or explosive limits: Not available

Vapour pressure  $1 \times 10^{-2}$  mPa

Vapour density: No data available.

Relative density: No data available

Solubility: Emulsifiable in water

Partition coefficient: not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available.

Kinematic viscosity: Not available.

Particle characteristics: Not applicable

**Section 10 - STABILITY AND REACTIVITY****10.1 Reactivity**

This product is unlikely to react or decompose under normal storage conditions.

**10.2 Storage Stability**

When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.

**10.3 Conditions to Avoid**

Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight

**10.4 Incompatible Materials**

No data available

**10.5 Polymerisation**

This product will not undergo polymerisation reactions.

**Section 11 - TOXICOLOGICAL INFORMATION****11.1 Health hazard information**

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Potential Health Effects. This section includes the possible adverse health effects that could occur if the substance is not handled as recommended.

**11.2 Toxicity information**

Acute Oral LD50 (rat) &gt;5000mg/kg for

Acute Dermal LD50 (rabbit) &gt;2000mg/kg

Acute Inhalation: LC50 (rat) 5mg/L air

Skin Irritant/corrosive: Skin Irritant

Eye Irritant/corrosive: Eye Irritant

Sensitisation Effects: None.

**Section 12 - ECOLOGICAL INFORMATION**

## Ecotoxicity

Acute Oral LD50 (Rat) 54 mg/kg

LC50 (96 hr) (Rainbow Trout) 25 mg/l

EC50 (48 hr) (Daphnia) &gt;100 mg/l

EC50 (72 hr) (Algae) &gt;12 mg/l

Acute Oral LD50 (Bee) &gt;43 µg/bee

## Persistence/degradability

Biodegradable. DT50 (soil) 0.5 days (typical)

## Bioaccumulative Potential

Octanol-water partition coefficient LogP = 4.14 (high)

## Soil Mobility

Soil organic carbon water partitioning coefficient Koc = 8000 (non-mobile)

## Environmental Exposure Limit:

None established

**Section 13 –DISPOSAL CONSIDERATIONS****13.1 Product Disposal**

Refer to product label. If possible, dispose of by using according to the label. Do not dispose of this product down drains or sewers. Follow all local, regional and national laws and regulations regarding hazardous waste disposal.

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**CLEVER 360****13.2 Container Disposal**

Triple rinse container and add residue to spray tank. Recycle clean, empty container through an agrichemical recycling service if possible or crush and bury in an approved landfill. Do not use container for any other purpose. Avoid contamination of any water supply or stream with product or empty container.

**Section 14 - TRANSPORT INFORMATION****This product is classified as a Non-Dangerous Good for transport in NZ**

UN Number: None allocated  
Class primary: None allocated  
Packing group: None allocated  
Proper Shipping Name: None allocated

**Section 15 - REGULATORY INFORMATION****New Zealand**

Product is classified as hazardous according to the Hazardous Substances (Hazard Classification)

Notice 2020 of the HSNO Act, 1996, HSR100921

HSNO Classification: 3.1D, 6.1E, 6.3A, 6.4A ,6.9B, 9.1C, 9.2A, 9.3C

See [www.epa.govt.nz](http://www.epa.govt.nz)

Qualifications	Yes
Tracking:	No
Safety Data Sheet:	Any quantity
Restricted to workplace only:	No
Quantity that must be secured when unattended:	-
Fire extinguishers	-
Quantity for secondary containment and emergency response plan:	100 L
Quantity for signage:	100 L
Quantity for Location certificate	-
Records of use (3 kg or more applied to area within 24 hours)	Yes
Quantity that requires management in accordance with HSW HS Regulations	-



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Hazardous Substances (Packaging) Notice 2017;  
Clause 9

None allocated

Additional controls: -

Additional information: Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Refer to WorkSafe for additional information on controls in the workplace; [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

ACVM: Registered under the Agricultural Compounds Veterinary Medicines Act 1997.

Registration number: P10224 See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz)

**Section 16 - OTHER INFORMATION**

Issue Date: June 13, 2024

Reason for reissue: New product

Replaces: Not applicable

Information references: Supplier Safety Data Sheet

NZ EPA Approved hazardous substances databases.

Workplace Exposure Standards and Biological Exposure Indices

Abbreviations: ACVM: Agricultural Chemicals and Veterinary Medicines Group Bw: Bodyweight.

HSNO: Hazardous substances and New Organisms Act 1996 (HSNO Act)

EPA: Environmental Protection Authority of New Zealand

CAS Number: Chemical Abstracts Service Number

LD50: Lethal Dose 50% (Population)

LC50: Lethal Concentration 50% (Population)

WES-TWA: Workplace exposure standards – Time-weighted average

WES-STEL: Workplace exposure standards – Short-term exposure limit

Personal Protection Standards: The following Standards provide general advice regarding safety

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clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: **AS/NZS 4501**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

End of Safety Data Sheet