

**MATERIAL SAFETY DATA SHEET**

**Cledim 240 G/L EC**

**Section 1. Identification**

**1.1 Product identifier**

Product Name: : Clethodim 240G/L EC  
CAS No. : 99129-21-2  
Chemical Name : (E,E)-2-[1-[[[(3-chloro-2-propenyl)oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one  
Molecular Formula : C<sub>17</sub>H<sub>26</sub>ClNO<sub>3</sub>S  
Molecular Weight : 359.9

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Industrial/Professional use spec : For professional use only  
Use of the substance/mixture : Agriculture herbicide

**1.3. Details of the supplier of the safety data sheet**

Hebei Lanrun Plant Protection Technology Co., Ltd.  
East Side of The Nanjing Third Road, Chemical Avenue, Lingang Development Zone, Cangzhou  
City, Hebei Province, P. R. China +86-317-5553093

**1.4 Emergency telephone number**

No additional information available

**Section 2. Hazard Identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin corrosion/irritation, Category 2 H315  
Serious eye damage/eye irritation, Category 2 H319  
Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411  
Adverse physicochemical, human health and environmental effects  
Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

## 2.2 GHS label elements, including precautionary statements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP] E Pictogram(s)



**Signal Word:** Warning

#### **Hazard Statements:**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H411 - Toxic to aquatic life with long lasting effects

#### **Precautionary statement(s)**

##### **Prevention**

P264 - Wash hands thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective clothing, protective gloves

##### **Response**

P302+P352 - IF ON SKIN: Wash with plenty of water

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P321 - Specific treatment (see the instruction on this label)

P332+P313 - If skin irritation occurs: Get medical advice/attention

P337+P313 - If eye irritation persists: Get medical advice/attention

P362+P364 - Take off contaminated clothing and wash it before reuse

P391 - Collect spillage

##### **Storage**

P405 Store locked up

##### **Disposal**

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

### 2.3 Other hazards which do not result in classification no

data available

## Section 3. Composition / information Ingredients

### 3.1 Substance

Not applicable

### 3.2 Mixture

Name	Product identifier	g/L	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Clethodim	(CAS No) 99129-21-2  (EU No) 619-396-7	240	Acute Tox. 4 (Oral), H302  Skin Sens. 1, H317  Aquatic Chronic 3, H412

### Section 4. First Aid Measures

#### 4.1 Description of first aid measures

- First-aid measures after inhalation :Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact :Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact :Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion :Call a poison center or a doctor if you feel unwell.
- 4.2 Most important symptoms/effects, acute and delayed Symptoms/injurie**

after skin contact : Irritation.

Symptoms/injuries after eye contact : Eye irritation.

#### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

### Section 5. Fire Fighting Measures

#### 5.1 Extinguishing media

Suitable Extinguishing Media : Water spray. Dry powder. Foam. Carbon dioxide.



## 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products : Toxic fumes may be released.

in case of fire

## 5.3 Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## Section 6. Accidental Release Measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2 Environmental precautions

Avoid release to the environment.

### 6.3 Methods and materials for containment and cleaning up

For containment :Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## Section 7. Handling and Storage

### 7.1 Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

### 7.3. Specific end use(s)

No additional information available

## Section 8. Exposure Controls / Personal Protection

### 8.1 Control parameters

No additional information available

### 8.2 Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Hand protection : Protective gloves  
Eye protection : Safety glasses  
Skin and body protection : Wear suitable protective clothing  
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment  
Environmental exposure controls : Avoid release to the environment.

## Section 9. Physical and Chemical Properties and Safety Characteristics

Physical state : Liquid  
Appearance : Yellow  
Odour : Slight aromatic  
Odour threshold : No data available  
pH : No data available  
Relative evaporation rate : No data available  
(butylacetate=1)  
Melting point : No data available

Freezing point	: No data available
Boiling point	: No data available
Flash point	: 61.8°C at 709.6 mmHg
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.95
Solubility	: <0.01g/L in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

## 9.2 Other information

No additional information available

## Section 10. Stability and Reactivity

### 10.1 Reactivitye

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2 Chemical Stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4 Conditions to avoid

None under recommended storage and handling conditions (See section7)

**10.5 Incompatible material**

No additional information available

**10.6 Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicological Information**

**11.1. Information on toxicological effects**

Acute toxicity : Not classified

Clethodim 240G/L EC	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat	>5.3mg/L / 4h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory/Skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

**Section 12. Ecological Information**

**12.1 Toxicity**

Ecology - general : Toxic to aquatic life with long lasting effects.

Clethodim 240G/L EC
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LC50 fish	1.8 mg/l 96 h
EC50 Daphnia	4.1 mg/l 96 h
ErC50 Algae	18 mg/l 72h

### 12.2 Persistence and degradability

Clethodim (99129-21-2)	
Persistence and degradability	May cause long-term adverse effects in the environment.

### 12.3 Bioaccumulative potential

Clethodim (99129-21-2)	
Log Pow	4.2
Bioaccumulative potential	Not established

### 12.4 Mobility in soil no

data available

### 12.5 Results of PBT and vPvB assessment no

data available

### 12.6 Other adverse effects: no data available no

data available

## Section 13. Disposal Considerations

### 13.1 Waste treatment method

Waste treatment methods :Dispose of contents/container in accordance with licensed collector's sorting instructions.

## Section 14. Transport Information

### In accordance with ADR / RID / IMDG / IATA / ADN 14.1

#### UN Number:

UN-No. (ADR) :3082

UN-No. (IMDG) :3082

UN-No. (IATA) :3082

UN-No. (ADN) :3082

UN-No. (RID) :3082

## 14.2 UN Proper Shipping Name

Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.

Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.

Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.

Proper Shipping Name (ADN) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.

Proper Shipping Name (RID) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.

## 14.3 Transport hazard class(es)

### ADR:

Transport hazard class(es) (ADR) :9

Danger labels (ADR) :9



### IMDG

Transport hazard class(es) (IMDG) :9

Danger labels (IMDG) :9



### IATA

Transport hazard class(es) (IATA) :9

Danger labels (IATA) :9



## ADN

Transport hazard class(es) (ADN) :9

Danger labels (ADN) :9



## RID

Transport hazard class(es) (RID) :9

Danger labels (RID) :9



### 14.4 Packing group, if applicable

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

### 14.5 Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes



Other information : No supplementary information available

#### 14.6 Special precautions for user

##### - Overland transport

Classification code (ADR) : M6  
Special provisions (ADR) : 274, 335, 601, 375

Limited quantities (ADR) : 5I

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Special packing provisions (ADR) : PP1

Mixed packing provisions (ADR) : MP19  
: T4

Portable tank and bulk container instructions (ADR)  
: TP1, TP29

Portable tank and bulk container special provisions (ADR)

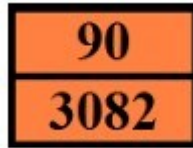
Tank code (ADR) : LGBV  
: AT

Vehicle for tank carriageTransport category (ADR)

Transport category (ADR) : 3

Special provisions for : V12  
carriage-Packages (ADR)

Special provisions for :CV13  
carriage-Loading, unloading and handling (ADR)



Hazard identification number :90

(Kemler No.)  
Orange plates

Tunnel restriction code (ADR) :E

EAC code :•3Z

### - Transport by sea

Special provisions (IMDG) : 274, 335, 969

Limited quantities IMDG) : 5L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P001, LP01

Special packing provisions (IMDG) : PP1

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP2, TP29

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Stowage category (IMDG) : A

### - Air transport

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y964

PCA limited quantity max net : 30kgG

quantity (IATA)

PCA packing instructions (IATA) :964  
PCA max net quantity (IATA) : 450L  
CAO packing instructions (IATA) :964  
CAO max net quantity (IATA) : 450L  
Special provisions (IATA) : A97, A158, A197  
ERG code (IATA) : 9L

### - Inland waterway transport

Classification code (ADN) : M6  
Special provisions (ADN) : 274, 335, 375, 601  
Limited quantities (ADN) : 5 L  
Excepted quantities (ADN) : E1  
Carriage permitted (ADN) : T  
Equipment required (ADN) :PP  
Number of blue cones/lights (ADN) : 0

### - - Rail transport

Classification code (RID) : M6  
Special provisions (RID) : 274, 335, 375, 601  
Limited quantities (RID) : 5 L  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Special packing provisions (RID) :PP1  
Mixed packing provisions (RID) :MP19  
Portable tank and bulk container : T4  
instructions  
(RID)  
: TP1, TP29  
Portable tank and bulk container  
special provisions (RID)

Tank codes for RID tanks (RID) : LGBV  
Transport category (RID) : 3  
Special provisions for carriage – : W12  
Packages (RID)  
Special provisions for carriage - : CW13, CW31  
Loading, unloading and handling  
(RID)  
Colis express (express parcels)  
(RID) : CE8  
Hazard identification number (RID) : 90

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code no data**

available

**15. Regulatory Information.**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**15.1.1. EU-Regulations**

Contains no substance on the REACH candidate list

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**16. Other Information**

**Information on revision**

Prepared on: 2021/05/26

Revision on: 2025/01/25

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.