

Section 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: CLOMASTAR®
Product Code: 036-01
UFI Code: HD95-J1TQ-H10F-2TUP

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

Product Use: Herbicide

1.3 Details of the supplier of the safety data sheet

Company: Life Scientific Ltd,
Block 4,
Belfield Office Park,
Beech Hill Road,
Dublin 4
Ireland
Telephone: +353 (0) 1 2832024
Email: info@lifescientific.com
Web: www.lifescientific.com

1.4 Emergency contact information

In case of Emergency: Tel. NHS 111

Section 2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aquatic Chronic Category 1 H410

2.2 Label Elements

Labelling according to Regulation (EU) 1272/2008

Hazard Pictograms:



Signal Word:

Warning

Hazard Phrases:

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Phrases:

P102 Keep out of reach of children.
P391 Collect spillage.
P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Other Phrases:

- SP1 Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
- SPe3 To protect non-target plants, respect an unsprayed buffer zone of 10 metres to non-crop land
- EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

No substances fulfil the criteria set out in Annex II, Part A of the REACH Regulation (EC) No 1907/2006.

3.2 Mixtures

Chemical Name	CAS	EC	Classification (Regulation (EC) No 1272/2008)	Concentration (% w/w)
Clomazone	81777-89-1	-	Acut Tox 4. H302 Acute Tox 4. H332 Aquatic Acute 1. H400 Aquatic Chronic 1. H410	<35
Sodium nitrate	7631-99-4	231-554-3	Ox. Sol. 3, H272 Eye Irrit. 2, H319	5
Calcium chloride	10043-52-4	233-140-8	Eye Irrit. 2, H319	5

Section 4. FIRST AID MEASURES

Generally, in case of doubt or if symptoms persist, always call a doctor. NEVER give anything by mouth to an unconscious person.

4.1 Description of first aid measures

- Inhalation: If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
- Ingestion: Let the exposed person rinse mouth and drink several glasses of water or milk, but not induce vomiting. If vomiting does occur, let him/her rinse mouth and drink fluids again. Get medical attention immediately.
- Skin contact: Immediately remove contaminated clothing and footwear. Flush skin with water. Wash with water and soap. Get medical attention if any symptom develops.
- Eye contact: Immediately rinse eyes with much water or eyewash solution, occasionally opening eyelids, until no evidence of chemical remains. Remove contact lenses after a few minutes and rinse again. Get medical attention if irritation develops.

4.2 Most important symptoms and effects, both acute and delayed

When fed to animals, the active ingredient in this product caused decreased activity, tearing eyes, bleeding from the nose and incoordination

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required in case of ingestion.

Section 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams.

5.2 Special hazards arising from the substance or mixture

The essential breakdown products are volatile, malodorous, toxic, irritant and inflammable compounds such as hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide and various chlorinated organic compounds.

5.3 Advice for firefighters

Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water runoff. Firemen should wear self-contained breathing apparatus and protective clothing.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should be available. In case of large spill (involving 10 tonnes of the product or more):

1. use personal protection equipment; see section 8
2. call emergency telephone no.; see section 1
3. alert authorities.

6.2 Environmental precautions

Contain the spill to prevent any further contamination of surface, soil or water. Wash waters must be prevented from entering surface water drains. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

6.3 Methods and materials for containment and cleaning up

It is recommended to consider possibilities to prevent damaging effects of spills, such as bunding or capping.

If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be absorbed onto an absorptive material such as universal binder, Fuller's earth or other absorbent clays. Collect the contaminated absorbent in suitable containers. Clean area with detergent and much water. Absorb wash liquid with absorbent and transfer to suitable containers. The used containers should be properly closed and labelled.

Large spills which soak into the ground should be dug up and transferred to suitable containers.

Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal.

6.4 Reference to other sections

No data is available.

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

In an industrial environment, it is recommended to avoid all personal contact with the product, if possible by using closed systems with remote system control. The material should be handled by mechanical means as much as possible. Adequate ventilation or local exhaust ventilation is required. The exhaust gases should be filtered or treated otherwise.

Remove contaminated clothing immediately. Wash thoroughly after handling. Before removing gloves, wash them with water and soap. After work, take off all work clothes and footwear. Take a shower, using water and soap. Wear only clean clothes when leaving job. Wash protective clothing and protective equipment with water and soap after each use.

Do not discharge to the environment. Do not contaminate water when disposing of equipment wash waters. Collect all waste material and remains from cleaning equipment, etc., and dispose of as hazardous waste.

7.2 Conditions for safe storage, including any incompatibilities

The product is stable under normal conditions of warehouse storage. Protect from frost and extreme heat. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading "POISON" is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.

7.3 Specific end use(s)

The product is a registered pesticide which may only be used for the applications it is registered for, in accordance with a label approved by the regulatory authorities.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

NA

8.2 Exposure controls

Individual protection measures, such as personal protective equipment:

When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping systems nonhazardous before opening.

The precautions mentioned below are primarily meant for handling of the undiluted product and for preparing the spray solution, but can be recommended for spraying as well.

In cases of incidental high exposure, maximal personal protection may be necessary, such as respirator, face mask, chemical resistant coveralls.

Eye / face protection:

Wear safety glasses. It is recommended to have an eye wash fountain immediately available in the workplace when there is a potential for eye contact.

Protection of hands:

Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for the product are unknown, but it is expected that they will give adequate protection.

Skin protection

Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of excessive or prolonged exposure, coveralls of barrier laminate may be required.

Respiratory protection:

The product does not automatically present an airborne exposure concern when handled carefully, but in the event of an accidental discharge of the material which produces a heavy vapour or mist, workers must put on officially approved respiratory protection equipment with a universal filter type including particle filter.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Liquid
Colour	Brown
Odour	Slight wood-like odour
pH:	5.5-7.5 (19.9°C)
Melting point/freezing point:	Not tested
Initial boiling point and boiling range (°C):	Not tested
Flash point (°C):	> 100 °C
Evaporation rate:	NA
Flammability:	Not tested
Upper/lower flammability or explosive limits:	Not tested
Vapour pressure:	Not tested
Vapour density:	Not tested
Relative density (g/mL):	1.14755 (20°C)
Partition coefficient: n-octanol/water:	Not tested
Self-ignition temperature:	>400°C
Decomposition temperature:	Not tested
Viscosity, kinematic:	158.81-1093.68 mPa.s (20°C)
Explosive properties:	Not explosive
Oxidising properties:	Not oxidising
Surface Tension	54.765 mN/m ± 0.425

9.2 Other Information

Miscibility	The product is dispersible in water.
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Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive.

10.2 Chemical Stability

This mixture is stable at the handling and storage conditions recommended in Section 7.

10.3 Possibility of hazardous reactions

No data is available

10.4 Conditions to avoid

None

10.5 Incompatible material

None

10.6 Hazardous decomposition products

On thermal decomposition (pyrolysis), releases: Nitrogen oxides, Hydrochloric acid, Chlorine. Carbon oxides (CO, CO₂).

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity LD50 Rat:	>5000 mg/kg
Acute Dermal Toxicity LD50 Rat:	>5000 mg/kg
Inhalation LC50 Rat:	5.21 mg/l/4 h (maximum attainable concentration- zero mortalist)
Acute Eye Irritation :	Not classified
Acute Skin Irritation :	Not classified

Sensitisation	Not classified
Mutagenicity:	Clomazone – No mutagenic effects noted.
Carcinogenicity:	Clomazone – No carcinogenic effects noted.
Developmental Toxicity:	Clomazone – No developmentally toxic effects noted.
Reproductive Toxicity:	Clomazone – No adverse reproductive effects noted.
Specific Organ Toxicity:	Clomazone – Single: No effects noted. Clomazone – Repeat: No effects noted.

11.2 Information on other hazards
Endocrine disrupting properties

Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Rainbow trout (<i>Oncorhynchus mykiss</i>)	96-h LC ₅₀ : 593 mg/l
Daphnids (<i>Daphnia magna</i>)	48-h EC ₅₀ : 491 mg/l
Green algae (<i>Pseudokirneriella subcapitata</i>)	72-h ErC ₅₀ : 366 mg/l
Duckweed (<i>Lemna gibba</i>)	7-day ErC ₅₀ : 3547 mg/l

12.2 Persistence and degradability

Clomazone is moderately persistent in the environment. Primary degradation half-lives vary with circumstances, from a few weeks to a few months in aerobic soil and water. Degradation occurs microbiologically.

The product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.

12.3 Bioaccumulative potential

Clomazone has a low potential to bioaccumulate. The measured bioaccumulation factor of clomazone is 27 - 40. It is rapidly excreted.

12.4 Mobility in soil

Under normal conditions clomazone is of moderate mobility in soil.

12.5 Results of PBT and vPvB assessment

This product contains no components considered to be either persistent, bioaccumulative & toxic (PBT) or very persistent & very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Product:
Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not discharge into drains or rivers. Waste management is performed without endangering human health and without harming the environment, and in particular without risk to water, air, soil, fauna and flora. Recycle or dispose of in accordance with current legislation, preferably via a certified collector or company. Do not contaminate the ground or water with waste; do not dispose of waste into the environment.

Contaminated packaging: Empty container completely. Keep the label on the recipient.

Section 14. TRANSPORT INFORMATION

Transport the product in accordance with the provisions of ADR for road, RID for rail, IMDG for the sea, and ICAO / IATA for air transport

14.1 UN Number

Not classified as hazardous material for transport.

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

May be hazardous in the environment

14.6 Special precautions for user

Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not discharge to the environment.

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

The product is not transported in bulk by ship.

Section 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

To avoid risks to man and the environment, comply with the instructions for use.

15.2 Chemical safety assessment

None.

Section 16. OTHER INFORMATION

Full list of relevant hazard and precautionary statements that were not given in full in sections 2 and 3.

H272	May intensify fire; oxidiser
H302	Harmful if swallowed
H319	Causes serious eye irritation
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

The information presented in this document is accurate to the best of our knowledge at the date of its publication. However, the information given is designed only as a guide for the methods of handling, storage, use, transportation and disposal of the product and is not considered a warranty or quality specification. Life Scientific Limited cannot be held responsible for any loss or damage resulting from the handling, storage, use or disposal of the product. The information contained in this document relates only to this specific product.



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