



SAFETY DATA SHEET

Clodinagan 240 EC

Revision Date 15-Dec-2019

Version 1

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Product No HRB00827-27
H-0113-11073-RAII 11073 9502399
AG-C1-240 EC

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

Product identifier

Clodinagan 240 EC

Synonyms Clodinafop-propargyl 240 EC
Pure substance/mixture Mixture

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

Recommended Use Herbicide
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address ADAMA SOUTH AFRICA (PTY) LTD
Ground Floor, Simeka House
The Vineyards Office Estate
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Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Aspiration toxicity Category 1 - (H304)
Acute toxicity - Oral Category 4 - (H302)
Specific target organ toxicity (repeated exposure) Category 2 - (H373)
Acute aquatic toxicity Category 1 - (H400)
Chronic aquatic toxicity Category 1 - (H410)

Label Elements

Hazard pictograms

**Signal word**

Danger

Hazard Statements

H302 - Harmful if swallowed
 H304 - May be fatal if swallowed and enters airways
 H373 - May cause damage to organs through prolonged or repeated exposure
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P102 - Keep out of reach of children
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P270 - Do not eat, drink or smoke when using this product
 P331 - Do NOT induce vomiting
 P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	Weight-%	CAS No	EC No	GHS Classification	M-Factor
Clodinafop-propargyl	20-24	105512-06-9	600-662-6	Acute Tox. 4 (H302) Skin Sens. 1 (H317) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=1 M=1
Cloquintocet-mexyl	4-7	99607-70-2		Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=1
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts	< 2	84989-14-0	284-903-7	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Chronic 3 (H412)	
Poly(oxy-1,2-ethanediyl), .alpha.-[tris(1-phenylethyl)ph enyl]-.omega.-hydroxy-	6-9	99734-09-5	619-457-8	Aquatic Chronic 3 (H412)	
Propylene carbonate	7-11	108-32-7	203-572-1	Eye Irrit. 2 (H319)	
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	49-55	N/A	922-153-0	Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)	

Section 4: FIRST AID MEASURES

First aid measures**General advice**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.

Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Immediate medical attention is required.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms None known.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

Special hazards arising from the substance or mixture

No specific hazard known.

Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
In the event of fire and/or explosion do not breathe fumes.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal.

Reference to other sections

Other Information

See also section 8,13

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits

Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Hand Protection

Gloves made of plastic or rubber.

Body Protection

Use suitable protective clothing and equipment if required, such as safety goggles certified to EN 166, gloves certified to EN 374, protective boots certified to EN 13832, and/or a water repellent woven coverall with 65% polyester and 35 % cotton.

Respiratory protection

Use only with adequate ventilation.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Appearance			
Physical state	: Liquid		
Color	: amber brown		
Odor	: characteristic		
Odor threshold	: No data available		
pH	: 4 - 6	CIPAC MT 75.2	
Melting point/freezing point °C	: ----		Not Applicable
Boiling point/boiling range °C	: No data available		
Flash point °C	: 102.5	CIPAC MT 12	
Evaporation rate	: Not Applicable		
Flammability (solid, gas)	: Not Applicable		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: ----		Not Applicable
Vapor density	: No data available		
Relative density	: 1.065 - 1.095	CIPAC MT 3.3	
Solubility(ies) mg/l	: ----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
Autoignition temperature °C	: No data available		
Decomposition temperature °C	: No data available		
Kinematic viscosity mm ² /s 40 °C	: 7.68		
Explosive properties	: Not an explosive		
Oxidizing properties	: No data available		
Other Information			
Bulk density g/ml	: ----		Not Applicable
Surface tension mN/m	: 28.4		

Section 10: STABILITY AND REACTIVITY

Reactivity

Not available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible Materials

No information available

Hazardous Decomposition Products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

Information on toxicological effects

Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: 2000	Rat	OECD 423	
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	: > 5.05	Rat	OECD 403	
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: Not irritating to eyes	Rabbit	OECD 405	
Respiratory/skin sensitization	: Not a skin sensitizer	Guinea pig	OECD 406	

Chronic toxicity

Germ cell mutagenicity

Chemical Name

Clodinafop-propargyl	: Not classified
Cloquintocet-mexyl	: No data available

Carcinogenicity

Chemical Name

Clodinafop-propargyl	: Not Carcinogenic
Cloquintocet-mexyl	: No data available

Reproductive toxicity

Chemical Name

Clodinafop-propargyl	: Not toxic for the reproductive system
Cloquintocet-mexyl	: No data available

STOT - single exposure

Chemical Name

Clodinafop-propargyl	: No data available
Cloquintocet-mexyl	: No data available

STOT - repeated exposure

Chemical Name

Clodinafop-propargyl	: H373 - May cause damage to organs through prolonged or repeated exposure
Cloquintocet-mexyl	: No data available

Aspiration hazard

Chemical Name

Clodinafop-propargyl	: No data available
Cloquintocet-mexyl	: No data available

Section 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Acute toxicity	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish 96-hour LC50 mg/l	: 5.0	Rainbow trout	92/69/EC C.1 L383A/179	
Crustacea 48-hour EC50 mg/l	: 12.9	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 1.8	P. subcapitata	OECD 201	
Other plants EC50 mg/l	: 0.87		OECD 221	days 14

Chronic aquatic toxicity	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish NOEC mg/l	: No data available			
Crustacea NOEC mg/l	: No data available			
Algae NOEC mg/l	: No data available			
Other plants NOEC mg/l	: No data available			

Terrestrial Toxicity

Birds Oral LD50 mg/kg

Chemical Name

Clodinafop-propargyl	: > 2000	Bobwhite quail	EPA-OPPTS 850.2100
Cloquintocet-mexyl	: > 2000	Mallard duck	

Bees Oral LD50 µg/bee

Chemical Name

Clodinafop-propargyl	: > 104		OECD 213, OECD 214
Cloquintocet-mexyl	: > 100		

Persistence and degradability

Abiotic Degradation

Water DT50 days

Chemical Name

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Clodinafop-propargyl	: 4.8		pH 7, 25 ° C
Cloquintocet-mexyl	: < 1		

Soil DT50 days

Chemical Name

Clodinafop-propargyl	: < 0.1	BBA IV 4-1	20° C
Cloquintocet-mexyl	: 0.5 - 2.4		

Biodegradation

Chemical Name

Clodinafop-propargyl	: No data available
Cloquintocet-mexyl	: No data available

Bioaccumulative potential

Partition Coefficient

(n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow

Chemical Name

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Clodinafop-propargyl	: 3.9		25° C
Cloquintocet-mexyl	: 5.03		25 °C

Bioconcentration factor (BCF)

Chemical Name

Clodinafop-propargyl	:	Low
Cloquintocet-mexyl	: ----	No data available

Mobility in soil

Adsorption/Desorption

Chemical Name

	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Clodinafop-propargyl	: 252 - 2364		.?
Cloquintocet-mexyl	: ----		Low mobility in soil

Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Clodinafop-propargyl, Cloquintocet-mexyl. Hydrocarbons, C10-13, aromatics)
Hazard Class	9
Packing Group	III
Marine pollutant	Yes
Special precautions for user	

RID/ADR

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Clodinafop-propargyl, Cloquintocet-mexyl. Hydrocarbons, C10-13, aromatics)
Hazard Class	9
Packing Group	III
Environmental hazard	Yes
Special precautions for user	

ICAO/IATA

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Clodinafop-propargyl, Cloquintocet-mexyl. Hydrocarbons, C10-13, aromatics)
Hazard Class	9
Packing Group	III
Environmental hazard	Yes
Special precautions for user	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable



* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

Section 15: REGULATORY INFORMATION

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

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H319 - Causes serious eye irritation
H304 - May be fatal if swallowed and enters airways
H411 - Toxic to aquatic life with long lasting effects
EUH066 - Repeated exposure may cause skin dryness or cracking

Revision Note

Changes made to the last version are labeled with this sign ***.

List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS Number - Chemical Abstracts Service number
EC Number - EINECS and ELINCS Number
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
OECD - Organization for Economic Co-operation and Development
PBT - Persistent, Bioaccumulative and Toxic substance
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT - Specific Target Organ Toxicity
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet