

Material	6203	Page 1 of 14
Product name	CLODINA/CLOQ MUC	Revision: September 2020
Safety data sheet according to EU Reg. 1907/2006 as amended		Supersedes May 2020

SAFETY DATA SHEET

CLODINA/CLOQ MUC

Revision: Sections containing a revision or new information are marked with a ♣.

♣ SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1. **Product identifier** **CLODINA/CLOQ MUC**
Contains clodinafop-propargyl, cloquintocet-mexyl and hydrocarbons, C10-C13, aromatics, < 1% naphthalene
- 1.2. **Relevant identified uses of the substance or mixture and uses advised against** Can be used for production of herbicides in closed systems only.
- 1.3. **Details of the supplier of the safety data sheet** **FCM Agricultural Solutions A/S**
 Thyborønvej 78
 DK-7673 Harbøre
 Denmark
SDS.Ronland@fmc.com
- 1.4. **Emergency telephone number**
Medical emergencies:
- | | |
|-------------------------------------|---|
| Austria: +43 1 406 43 43 | Malta: 112 |
| Belgium: +32 70 245 245 | Netherlands: +31 30 274 88 88 |
| Bulgaria: +359 2 9154 409 | Norway: +47 22 591300 |
| Cyprus: 1401 | Poland: +48 22 619 66 54 |
| Czech Republic: +420 224 919 293 | +48 22 619 08 97 |
| +420 224 915 402 | Portugal: 800 250 250 (in Portugal only) |
| Denmark: +45 82 12 12 12 | +351 21 330 3284 |
| England and Wales: 111 | Romania: +40 21318 3606 |
| Estonia: +372 7943500 | Scotland: +8454 24 24 24 |
| Finland: +358 9 471 977 | Slovakia: +421 2 54 77 4 166 |
| France: +33 (0) 1 45 42 59 59 | Slovenia: +386 41 650 500 |
| Greece: 30 210 77 93 777 | South Africa: +27 83 123 3911 (Bateleur Emergency Response Co.) |
| Hungary: +36 80 20 11 99 | Spain: +34 91 562 04 20 |
| Ireland (Republic): +353 1 837 9964 | Sweden: +46 08-331231 |
| Italy: +39 02 6610 1029 | 112 |
| Latvia: +371 670 42 473 | Switzerland: 145 |
| 112 | Turkey: 114 |
| Lithuania: +370 523 62052 | U.S.A. & Canada: +1 800 / 331 3148 |
| +370 687 53378 | All other countries: +1 651 / 632 6793 (Collect) |
| Luxembourg: +352 8002 5500 | |

Material	6203	Page 2 of 14
Product name	CLODINA/CLOQ MUC	September 2020

For fire, leak, spill or other accident emergencies:

U.S.A.: +1 800 / 424 9300 (CHEMTREC)
 All other countries: +1 703 / 741 5970 (CHEMTREC - Collect)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Sensitisation – skin: Category 1 (H317)
 Specific target organ toxicity – repeated exposure: Category 2 (H373)
 Aspiration toxicity: Category 1 (H304)
 Hazards to the aquatic environment, acute: Category 1 (H400)
 chronic: Category 1 (H410)

WHO classification Class U (unlikely to present acute hazard in normal use)

Health hazards The product may cause allergic sensitisation. It may cause liver damage on repeated exposure.

Environmental hazards The product is very toxic to aquatic organisms.

2.2. Label elements

According to EU Reg. 1272/2008 as amended

Product identifier CLODINA/CLOQ MUC
 Contains clodinafop-propargyl, cloquintocet-mexyl and hydrocarbons, C10-C13, aromatics, < 1% naphthalene

Hazard pictograms (GHS07, GHS08, GHS09)



Signal word Danger

Hazard statements

H304 May be fatal if swallowed and enters airways.
 H317 May cause an allergic skin reaction.
 H373 May cause damage to liver through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Supplementary hazard statements

EUH066 Repeated exposure may cause skin dryness and cracking.
 EUH401 To avoid risks to human health and the environment, comply with the instructions of use.

Precautionary statements

P261 Avoid breathing vapours.
 P280 Wear protective gloves.
 P310 Immediately call a POISON CENTER or physician.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P331 Do NOT induce vomiting.
 P501 Dispose of contents and container as hazardous waste.

Material	6203	Page 3 of 14
Product name	CLODINA/CLOQ MUC	September 2020

- 2.3. **Other hazards** None of the ingredients in the product meets the criteria for being PBT or vPvB.

♣ SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1. **Substances** The product is a mixture, not a substance.
- 3.2. **Mixtures** See section 16 for full text of hazard statements.

Active ingredient

Clodinafop-propargyl	Content: 15% by weight
CAS name	Propanoic acid, 2-[4-[(5-chloro-3-fluoro-2-pyridinyl)oxy]-phenoxy]-, 2-propynyl ester, (2R)-
CAS no.	105512-06-9
IUPAC name	Prop-2-yn-1-yl (R)-2-[4-[(5-chloro-3-fluoro-2-pyridinyl)oxy]-phenoxy]propanoate
ISO name/EU name	Clodinafop-propargyl
EC no. (EINECS no.)	None
EU index no.	None
EU registration no.	607-625-00-3
Molecular weight	349.74
Classification of the ingredient	Acute oral toxicity: Category 4 (H302) Sensitisation – skin: Category 1A (H317) Specific target organ toxicity – repeated exposure: Category 2 (H373) Hazards to the aquatic environment, acute: Category 1 (H400) chronic: Category 1 (H410) M-factor 1 Specific concentration limit for Skin Sens. 1A (H317): C ≥ 0.001 %

Reportable ingredients

	Content (% w/w)	CAS no.	EC no.	Classification
Hydrocarbons, C10-C13, aromatics, < 1% naphthalene Reg. no. 01-2119451097-39	73		922-153-0	Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411) EUH066
Cloquintocet-mexyl Reg. no. 01-0000012013-89	12	99607-70-2	None	Acute Tox. 4 (H302) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) M-factor 1 Aquatic Chronic 1 (H410) M-factor 1 EUH401

SECTION 4: FIRST AID MEASURES

- 4.1. **Description of first aid measures**
- Inhalation If experiencing any discomfort, immediately remove from exposure..

Material	6203	Page 4 of 14
Product name	CLODINA/CLOQ MUC	September 2020

Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance

Skin contact	Immediately remove contaminated clothing and footwear. Flush skin with water. Wash with water and soap. See physician if irritation 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.
Ingestion	Inducing vomiting is not recommended. Rinse mouth and drink water or milk. If vomiting does occur, rinse mouth and drink fluids again. Get medical attention immediately.
4.2. Most important symptoms and effects, both acute and delayed	Allergic reactions. In animal tests, non-specific signs of toxicity were seen after oral intake, such as difficulty breathing and sedation.
4.3. Indication of any immediate medical attention and special treatment needed	Immediate medical attention is required in case of ingestion. It may be helpful to show this safety data sheet to physician.
Notes to physician	A specific antidote for exposure to this material is not known. Gastric lavage and/or administration of activated charcoal can be considered. After decontamination, treatment of exposure is as for a general chemical and should be directed at the control of symptoms and the clinical condition. The product contains petroleum distillates which may pose an inhalation pneumonia hazard.

SECTION 5: FIRE-FIGHTING 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, toxic, irritant and inflammable compounds such as carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride, hydrogen fluoride and various chlorinated and fluorinated 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.

Material	6203	Page 5 of 14
Product name	CLODINA/CLOQ MUC	September 2020

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, sealable 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.

Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill this may mean wearing respirator, face mask or eye protection, chemical resistant clothing, gloves and boots.

Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area. Remove sources of ignition. Avoid and reduce mist formation as much as possible.

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. See GHS (Annex 4, Section 6).

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, hydrated lime, Fuller's earth or other absorbent clays. Collect the contaminated absorbent in suitable containers. Clean area with soda lye 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

See subsection 8.2. for personal protection.
 See section 13 for disposal.

♣ SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

The product must always be handled in a closed system under strictly controlled conditions.

Material	6203	Page 6 of 14
Product name	CLODINA/CLOQ MUC	September 2020

For its use as a pesticide, first look for precautions and personal protection measures on the officially approved label on the packaging or for other official guidance or policy in force. If these are lacking, see section 8.

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.

Inhalation of vapours of the product can cause lowered consciousness, which increases the risks of operating machinery and driving.

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. See section 13 for disposal.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored at temperatures between 10 and 40°C. Protect against strong heat from sunshine or other source, e.g. fire.

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 meant for the production of registered pesticides which may only be used for the applications they are registered for, in accordance with a label approved by the regulatory authorities.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Personal exposure limits

To our knowledge, not established for other ingredients in this mixture than aromatic hydrocarbons.

Aromatic hydrocarbons

100 ppm total hydrocarbon is recommended.

However, other personal exposure limits defined by local regulations may exist and must be observed.

Clodinafop-propargyl

DNEL

Not established

PNEC, aquatic environment

The EFSA has established an AOEL of 0.026 mg/kg bw/day
 0.01 mg/l

Material	6203	Page 7 of 14
Product name	CLODINA/CLOQ MUC	September 2020

Cloquintocet-mexyl	Permissible exposure levels; values for farm workers
DNEL, dermal	0.25 mg/cm ² for acute local effects
	3.2 mg/kg bw/day for long-term effects
DNEL, inhalation	0.05 mg/m ³ for long-term effects
PNEC, aquatic environment	0.0024 mg/l in surface water
	0.203 mg/kg dry weight in sediment
	> 0.34 mg/kg dry weight in soil

Aromatic hydrocarbons	
DNEL, dermal	12.5 mg/kg bw/day
DNEL, inhalation	151 mg/m ³
PNEC, aquatic environment	Not applicable

8.2. Exposure controls

Personal protection	When used in a closed system, personal protection equipment will not be required during normal work. When it is necessary to open the system, personal protection equipment must be used, depending on the work to be done. Consider the need to render equipment or piping systems non-hazardous before opening.
---------------------------	---



Respiratory protection

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.



Protective gloves

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 if the amount of work to be done manually is kept limited.



Eye 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.



Other 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.

♣ SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Liquid
----------------------	--------

Colour	Yellow
Odour	Of aromatic hydrocarbons
Melting point/freezing point	Not determined
Boiling point or initial boiling point and boiling range	Not determined
Flammability	Aromatic hydrocarbons : 200 - 310°C Ignitable
Lower and upper explosive limit ..	Aromatic hydrocarbons : 0.6 - 7.0 vol% (≈ 0.6 - 0.7 kPa)
Flash point	> 100°C (Pensky-Martens closed cup)
Auto-ignition temperature	Aromatic hydrocarbons : above 450°C
Decomposition temperature	Not determined
pH	Not determined
Kinematic viscosity	Not determined
Solubility	Solubility of clodinafop-propargyl at 25°C in toluene 690 g/l n-hexane 8.6 g/l water 4.0 mg/l Solubility of cloquintocet-mexyl in: acetone > 250 g/l n-heptane 8.95 g/l water 0.59 mg/l at 25°C
Partition coefficient n-octanol/water (log value)	Clodinafop-propargyl : log K _{ow} = 3.90 at 25°C Cloquintocet-mexyl : log K _{ow} = 5.03 at 25°C Aromatic hydrocarbons : some of the main components have log K _{ow} = 4.0 - 4.4 at 25°C by model calculation
Vapour pressure	Clodinafop-propargyl : 3.2 x 10 ⁻⁶ Pa at 25°C Cloquintocet-mexyl : 5.3 x 10 ⁻⁶ Pa at 25°C Aromatic hydrocarbons : < 0.1 kPa at 25°C
Density and/or relative density	Not determined
Relative vapour density	(Air = 1)
Particle characteristics	Aromatic hydrocarbons : > 1 Not applicable (liquid)
Other information	
Evaporation rate	(Butyl acetate = 1) Aromatic hydrocarbons : < 0.01

10.1. Reactivity	To our knowledge, the product has no special reactivities.
10.2. Chemical stability	The product is stable during normal handling and storage at ambient temperatures.
10.3. Possibility of hazardous reactions	None known.
10.4. Conditions to avoid	Heating of the product will produce harmful and irritant vapours.
10.5. Incompatible materials	None known.
10.6. Hazardous decomposition products	See subsection 5.2.

Material	6203	Page 9 of 14
Product name	CLODINA/CLOQ MUC	September 2020

♣ SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

* = Based on available data, the classification criteria are not met.

Product

Acute toxicity	The product is not considered harmful by ingestion, inhalation or dermal contact. * The acute toxicity of the product is estimated as:
Route(s) of entry	
- ingestion	LD ₅₀ , oral, rat: > 2000 mg/kg
- skin	LD ₅₀ , dermal, rat: > 2000 mg/kg
- inhalation	LC ₅₀ , inhalation, rat: > 5 mg/l/4 h
Skin corrosion/irritation	May be mildly irritating to skin. *
Serious eye damage/irritation	May be mildly irritating to eyes. *
Respiratory or skin sensitisation ...	May cause skin sensitisation.
Germ cell mutagenicity	The product contains no ingredient known to be mutagenic. *
Carcinogenicity	The product contains no ingredient known to be carcinogenic. *
Reproductive toxicity	The product contains no ingredient found to have adverse effects on reproduction. *
STOT – single exposure	To our knowledge, no specific effects have been observed after single exposure. *
STOT – repeated exposure	The following is found for clodinafop-propargyl: Serious liver damage was found in animal tests at exposure levels of 8 mg clodinafop-propargyl/kg bw/day (method OECD 408).
Aspiration hazard	The product presents an aspiration pneumonia hazard.

Clodinafop-propargyl

Toxicokinetics, metabolism and distribution	Clodinafop-propargyl is rapidly absorbed and widely distributed in the body. The highest concentrations were found in fat, muscle, liver, blood and kidneys. It is extensively metabolised. Excretion is rapid as well. There is a potential for accumulation in fat.
Acute toxicity	The substance is harmful by ingestion, but not considered as harmful by inhalation or dermal contact. The acute toxicity of clodinafop-propargyl is measured as:
Route(s) of entry	
- ingestion	LD ₅₀ , oral, rat (male): 1392 mg/kg (method OECD 401) LD ₅₀ , oral, rat (female): 2271 mg/kg

Material	6203	Page 10 of 14
Product name	CLODINA/CLOQ MUC	September 2020

- skin	LD ₅₀ , dermal, rat: > 2000 mg/kg (method OECD 402) *
- inhalation	LC ₅₀ , inhalation, rat: > 2.3 mg/l/4 h (method OECD 403) *
Skin corrosion/irritation	Not irritating to skin (method OECD 404). *
Serious eye damage/irritation	Slightly irritating to eyes (method OECD 405). *
Respiratory or skin sensitisation ...	Clodinafop-propargyl is found to be an allergic sensitizer (method OECD 406).

Cloquintocet-mexyl

Toxicokinetics, metabolism and distribution

Cloquintocet-mexyl is very rapidly absorbed and excreted after oral intake, within one day. It is mainly found in the gastrointestinal tract, where it is partially metabolised. There is no potential for accumulation.

Acute toxicity	The substance is harmful by ingestion. The acute toxicity is measured as:
Route(s) of entry	
- ingestion	LD ₅₀ , oral, rat: 1098 mg/kg (method OECD 425)
- skin	LD ₅₀ , dermal, rat: > 2000 mg/kg (method OECD 402) *
- inhalation	LC ₅₀ , inhalation, rat: > 5.05 mg/l (method OECD 403) *
Skin corrosion/irritation	Mildly irritating to skin (method OECD 404). *
Serious eye damage/irritation	Mildly irritating to eyes (method OECD 405). *
Respiratory or skin sensitisation ...	Skin sensitizer (method OECD 429).

Hydrocarbons, C10-C13, aromatics, < 1% naphthalene

Acute toxicity	The substance is not considered as harmful. * The acute toxicity is measured on a similar product is:
Route(s) of entry	
- ingestion	LD ₅₀ , oral, rat: > 5000 mg/kg (method OECD 401)
- skin	LD ₅₀ , dermal, rat: > 2000 mg/kg (method OECD 402)
- inhalation	LC ₅₀ , inhalation, rat: > 4.7 mg/l (method OECD 403)
Skin corrosion/irritation	Can cause skin dryness (measured on similar products; method OECD 404).
Serious eye damage/irritation	May cause mild, short-lasting discomfort to eyes (measured on similar products; method OECD 405). *
Respiratory or skin sensitisation ...	Not expected to cause respiratory or skin sensitisation (measured on similar products; method OECD 406). *
Aspiration hazard	Aromatic hydrocarbons present an aspiration hazard.

11.2. **Information on other hazards** No more relevant information is available.

Material	6203	Page 11 of 14
Product name	CLODINA/CLOQ MUC	September 2020

♣ SECTION 12: ECOLOGICAL INFORMATION

- 12.1. **Toxicity** The product is very toxic to aquatic plants and fish. It may be harmful to aquatic invertebrates, but is not considered as harmful to birds, soil micro- and macroorganisms and insects.

The ecotoxicity of **clodinafop-propargyl** is measured as:

- Fish	Rainbow trout (<i>Oncorhynchus mykiss</i>)	96-h LC ₅₀ : 0.39 mg/l 21-day NOEC: 0.1 mg/l
- Invertebrates	Daphnids (<i>Daphnia magna</i>)	48-h EC ₅₀ : 74 mg/l 21-day NOEC: 0.23 mg/l
- Algae	Green algae (<i>Scenedesmus subspicatus</i>)	72-h IC ₅₀ : 1.7 mg/l
- Earthworms	<i>Eisenia fetida</i>	14-day LC ₅₀ : 210 mg/kg dry soil
- Birds	Bobwhite quail (<i>Colinus virginianus</i>)	LD ₅₀ : 1455 mg/kg
	Mallard duck (<i>Anas platyrhynchos</i>)	LD ₅₀ : > 2000 mg/kg
- Bees	Honey bee (<i>Apis mellifera</i>)	48-h LD ₅₀ , contact: > 100 µg/bee 48-h LD ₅₀ , oral: > 100 µg/bee

The ecotoxicity of **cloquintocet-mexyl** is measured as:

- Fish	Rainbow trout (<i>Salmo gairdneri</i>)	96-h LC ₅₀ : > 76 mg/l
	Catfish (<i>Ictalurus punctatus</i>)	96-h LC ₅₀ : 14 mg/l
- Invertebrates	Daphnids (<i>Daphnia magna</i>)	48-h LC ₅₀ : > 100 mg/l
- Algae	Green algae (<i>Scenedesmus subspicatus</i>)	96-h EC ₅₀ : 0.63 mg/l
- Birds	Bobwhite quail (<i>Colinus virginianus</i>)	LD ₅₀ : > 2000 mg/kg
	Mallard duck (<i>Anas platyrhynchos</i>)	LD ₅₀ : > 2000 mg/kg
- Insects	Honey bee (<i>Apis mellifera</i>)	48-h LD ₅₀ , oral: > 100 µg/bee 48-h LD ₅₀ , contact: > 100 µg/bee

- 12.2. **Persistence and degradability** **Clodinafop-propargyl** is biodegradable, but does not meet the criteria for being readily biodegradable. Degradation half-lives are found to be less than 1 day in aerobic soil.

Cloquintocet-mexyl is biodegradable, but does not meet the criteria for being readily biodegradable. Primary degradation half-lives are found to be less than 1 day in aerobic soil.

Aromatic hydrocarbons are readily biodegradable as measured according to OECD guidelines. However, they are not always rapidly degraded in the environment, but are expected to be degraded at a moderate rate, depending on circumstances.

Material	6203	Page 12 of 14
Product name	CLODINA/CLOQ MUC	September 2020

- 12.3. **Bioaccumulative potential** See section 9 for octanol-water partition coefficients.
- Due to rapid degradation, nor **clodinafop-propargyl**, nor **cloquintocet-mexyl** bioaccumulate.
- Aromatic hydrocarbons** have a potential to bioaccumulate if continuous exposure is maintained. Most components can be metabolised by many organisms. Bioaccumulation factors (BCFs) of some of the main components are 1200 - 3200 by model calculation.
- 12.4. **Mobility in soil** **Clodinafop-propargyl** has low mobility in soil.
- Cloquintocet-mexyl** is not mobile in the environment. It adsorbs strongly to soil.
- Aromatic hydrocarbons** are not mobile in the environment, but are volatile and will evaporate to the air if released onto water or on the surface of soil. They float and can migrate to sediment.
- 12.5. **Results of PBT and vPvB assessment** None of the ingredients meets the criteria for being PBT or vPvB.
- 12.6. **Endocrine disrupting properties** None of the ingredients is known to have endocrine disrupting properties.
- 12.7. **Other adverse effects** Other relevant hazardous effects in the environment are not known.

SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1. **Waste treatment methods** Remaining quantities of the material and empty but unclean packaging should be regarded as hazardous waste.
- Disposal of waste and packagings must always be in accordance with all applicable local regulations.
- Disposal of product According to the Waste Framework Directive (2008/98/EC), possibilities for reuse or reprocessing should first be considered. If this is not possible, the material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.
- Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
- Disposal of packaging It is recommended to consider possible ways of disposal in the following order:
1. Reuse or recycling should first be considered. If offered for recycling, containers must be emptied and triply rinsed (or equivalent). Do not discharge rinsing water to sewer systems.
 2. Controlled incineration with flue gas scrubbing is possible for

Material	6203	Page 13 of 14
Product name	CLODINA/CLOQ MUC	September 2020

combustible packaging materials.

3. Delivery of the packaging to a licensed service for disposal of hazardous waste.

4. Disposal in a landfill or burning in open air should only occur as a last resort. For disposal in a landfill, containers should be emptied completely, rinsed and punctured to make them unusable for other purposes. If burned, stay out of smoke.

♣ SECTION 14: TRANSPORT INFORMATION

ADR/RID/IMDG/IATA/ICAO classification

- | | |
|--|---|
| 14.1. UN number | 3082 |
| 14.2. UN proper shipping name | Environmentally hazardous substance, liquid, n.o.s. (clodinafop-propargyl, cloquintocet-mexyl and alkyl(C3-C6)benzenes) |
| 14.3. Transport hazard class(es) | 9 |
| 14.4. Packing group | III |
| 14.5. Environmental hazards | Marine pollutant |
| 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. Maritime transport in bulk according to IMO instruments .. | The product is not transported in bulk by ship. |

SECTION 15: REGULATORY INFORMATION

- | | |
|--|---|
| 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture | Seveso category (Dir. 2012/18/EU): dangerous for the environment

Young people under the age of 18 are not allowed to work with the substance.

All ingredients are covered by EU chemical legislation. |
| 15.2. Chemical safety assessment | A chemical safety assessment is not required to be included for this product. |

♣ SECTION 16: OTHER INFORMATION

Relevant changes in the safety data sheet	Minor corrections only.
---	-------------------------

List of abbreviations	AOEL Acceptable Operator Exposure Level
	CAS Chemical Abstracts Service
	Dir. Directive
	DNEL Derived No Effect Level

Material	6203	Page 14 of 14
Product name	CLODINA/CLOQ MUC	September 2020

EC	European Community
EC ₅₀	50% Effect Concentration
EFSA	European Food Safety Authority
EINECS	European INventory of Existing Commercial Chemical Substances
GHS	Globally Harmonized classification and labelling System Of chemicals, seventh revised edition 2017
IC ₅₀	50% Inhibition Concentration
IMO	International Maritime Organisation
ISO	International Organisation for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	50% Lethal Concentration
LD ₅₀	50% Lethal Dose
NOEC	No Observed Effect Concentration
n.o.s.	Not otherwise specified
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative, Toxic
PNEC	Predicted No Effect Concentration
Reg.	Registration, or Regulation
STOT	Specific Target Organ Toxicity
vPvB	very Persistent, very Bioaccumulative
WHO	World Health Organisation

References Data on ingredients are available from published literature and can be found several places.

Method for classification Calculation method

Used hazard statements
 H302 Harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H317 May cause an allergic skin reaction.
 H373 May cause damage to liver through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness and cracking.
 EUH401 To avoid risks to human health and the environment, comply with the instructions of use.

Advice on training This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product vary and situations unforeseen by FMC Corporation may exist. The user has to check the validity of the information under local circumstances.

Prepared by: FMC Agricultural Solutions A/S / GHB